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ENERGY

No. 83

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GENERAL

DEVELOPMENT OF MANGYSHLAK TPK REVIEWED

Alma Ata KAZAKHSTANSKAYA PRAVDA in Russian 25 Oct 81 p 3

[Article's materials prepared by correspondent G. Lil'dyayev, Shevchenko: "Prospects of the Peninsula"]

[Text] The workers of Mangyshlak fulfilled the economic and social tasks of the 10th Five-Year Plan. All sectors of the regional production complex underwent further development. Since the start of the five-year plan, industrial production output grew 14 percent. More than 85.6 million tons of petroleum and gas condensate and 25 billion cubic meters of natural and concomitant gas were produced. Three new deposits of the liquid fuel were discovered and five have begun to be developed. Compared to 1975, production of mineral fertilizers has grown 1.6-fold and that of liquified gas and stable gasoline--1.7-fold.

In the course of the past five-year plan, more than 2 billion rubles of capital investment were used; fixed capital costing 1.7 billion rubles became operational. Construction of the Shevchenko Plastics Plant was completed. A total of 1,520 petroleum and gas wells went into operation. The fitting out of high-priority installations on the petroleum deposits on Buzachi Peninsula was completed significantly ahead of normative time periods. More than 800,000 square meters were added to the housing fund during the five-year period, and trade, consumer, medical and cultural services were improved in the oblast.

"Develop at an accelerated pace the petroleum producing industry in the regions of Western Siberia, in Kazakh SSR.... Expand geological prospecting work for petroleum and gas in West Kazakhstan, speed up the development of petroleum deposits on the Buzachi Peninsula"--these lines of the Basic Directions set the tasks facing the workers of Mangyshlak during the 11th Five-Year Plan. The results of the ten months of the first year of the new five-year plan attest to the stable development of the oblast's economy. Collectives of construction workers, drillers, petroleum workers, drivers are working and exceeding plan targets. A few days ago, the petroleum workers of Mangyshlak reported that they had fulfilled their socialist commitments adopted in honor of the 64th anniversary of Great October--they produced 150,000 tons of liquid fuel above the annual plan.

The Mangyshlak Regional Production Complex is entering the period of its maturity. Specializing primarily in the recovery of petroleum and gas, it consists of a group of operating and under-construction enterprises and associations with a single technology and common sources of raw materials and energy. Increasingly deeper and more comprehensive utilization of the area's natural resources--such is the main route of development of the region's economy.

What the Storerooms Are Rich In

In habitually calling Mangyshlak a peninsula of treasures, we not only acknowledge the phrase but also state an obvious fact--the region's bowels are incalculably rich. In what? To this we hardly have a complete answer so far. The fact is that in addition to the widely known deposits of "black gold" there are other riches.

The search of geological prospectors from year to year augments our knowledge of the subterranean storerooms and bolsters the mineral and raw-material base of Mangyshlak Regional Production Complex. This search is primarily directed for further growth of deposits of petroleum and gas.

The discovery and accelerated exploration of deposits of liquid fuel on Buzachi Peninsula has radically improved the state of the raw-material base of the petroleum producing industry of the oblast. Here, at the new deposits, the production level of petroleum should reach 8-10 million tons per year. There is also another side to the matter. The petroleum of Buzachi Peninsula is unique in its composition; its high industrial concentrations of valuable components make it possible to obtain in addition to traditional products of refining many other raw-material resources.

A most important result of the prospecting during 1976-1980 has been the industrial flow of petroleum from the Jurassic deposits at the Kultuk area in the region of Mertvyy Kultuk wastes. At the present time, this territory is being studied intensively. In the opinion of specialists of the Mangyshlakneftegazrazvedka Expedition one should expect here the discovery of new deposits.

The prospecting work in the rest of the oblast has still not produced any significant results. Drilling at a large number of structures of Severnyy Ustyurt make it possible to put on the map two small deposits--Karakuduk and Arystanovskoye. Thus, the main portion of Severnyy Ustyurt may be classified under regions of little promise with respect to its Cretaceous and Jurassic deposits. As for pre-Jurassic strata, this part of the layer has been shown to have collectors and mantles. On the Byubkaragan Peninsula, despite flows in some wells in the areas of Byubedzhik and Severnyy Kusaynik, prospecting work has also produced so far no perceptible results.

In summarizing the results of the conducted prospecting work for petroleum and gas, one may point out that practically the entire oblast has been studied in detail in regard to Cretaceous and Jurassic deposits. An exclusion in this case is the region of wastes of Mertvyy Kultuk and Kaydak and also the water area of the Caspian Sea, especially that part, which abuts on Buzachi Peninsula. In point of fact, this coastal strip is today the most promising zone in the search for petroleum and gas.

The rather considerable knowledge of the Jurassic-Cretaceous complex calls for a redirection of search to pre-Jurassic strata, including the Paleozoic. For this reason it is necessary to expand the volume of geophysical research on discovery and accelerated preparation of structures for deep drilling.

In order to achieve the growth positions of stocks of raw material planned for the 11th Five-Year Plan, Mangyshlak's geological prospectors must develop a qualitative construction of deep wells and study the prospects of petroleum and gas presence under more difficult geological conditions.

It was already stated that petroleum and gas are the chief but far from only resources of the peninsula. Its depths contain coal, and there has been disclosed a whole series of iron-ore, manganese and copper deposits and ore manifestations. The Aurtash deposit is unique in supply and content of the valuable raw materials. During the present five-year plan, it is planned to complete laboratory and semicommercial testing of refining of different concentrates.

Mangyshlakskaya Oblast is famous for its numerous beds of rock suitable for the production of construction materials: limestone-shell rock, sandstone, chalk, sand-gravel deposits, sand, clays and kirs. Stone-shell rock does not require any recommendation--slabs of it are used for the facing of many buildings in Alma Ata and Olympic facilities in Moscow. The shell rock of the Zhetybay bed is particularly good: it is durable and has a beautiful coloration. The deposits of this valuable construction material are practically limitless in the oblast. The already located deposits of clay make it possible to initiate the production of brick and keramzite. Lime can be produced in large amounts from chalk and limestone.

Deposits of mineral-chemical raw materials have also been discovered on Mangyshlak. Reference is made to phosphorites, barite, mountain-leather, clays. Barytic ores of the Aurtash deposit are of major practical interest. The supplies of this deposit come under the category of large. Prospecting for it continues. It should also be mentioned that barite is widely used in weighting of the solution. The extent of drilling both on Mangyshlak and in the republic as a whole is being expanded.

The peninsula's mineral wealth also includes significant deposits of so-called heavy petroleum and bitumen-containing rocks--kirs. This valuable raw material is used in road construction. The total aggregate deposits of kirs could be estimated at no less than 120 million tons.

We know that Mangyshlak has no open water bodies. A big part of the requirements for drinking and industrial water comes from desalination of sea water. This circumstance has urged on the of hydrogeological work. In the last 15-20 years, a whole series of beds of subterranean water has been discovered, studied and put to use. On South Mangyshlak there have been found sources with aggregate operable reserves of tens of thousands of cubic meters of water per day. The search of the hydrogeologists will be continued, especially on Buzachi Peninsula.

"Inventorying" of Mangyshlak subterranean treasures has still not been completed. Geological prospectors expect new discoveries, which will make it possible to develop and strengthen the mineral-raw material base of Mangyshlak Regional Production Complex.

Buzachi--the Main Direction

The term "pioneering territory," adopted by specialists engaged in regional planning, provides a most incomplete idea of Buzachi Peninsula, where at the present the outfitting and start-up of new petroleum deposits are proceeding at a rapid tempo. The peninsula, located more than 300 kilometers from settled areas, had no means of communication or power connections; numerous problems had to be solved in connection with their construction. It was extremely difficult to gain access to the new deposits. Located on the sloping shore of the Caspian, the Kalamkas deposit, for example, was periodically flooded with sea water. Dikes, approach routes and filled areas had to be built, and a tremendous volume of earthworks had to be done.

The history of development of the mineral wealth of Mangyshlak is a story of landings by firstcomers. In this sense Buzachi Peninsula was no exception. Powerful mechanized detachments set out from Shevchenko and Novyy Uzen' to the northern littoral of the Caspian. A continuous flow of equipment arrived at Mangyshlak, while workers and specialists came from all parts of the country. New labor collectives were formed. During these strenuous, difficult days, the "Buzachi headquarters" performed a great deal of organizational and coordinating work; it had been set up under the Mangyshlakskiy Obkom of the Communist Party of Kazakhstan.

The enthusiasm and experience of the construction workers, drivers and transport workers and well-organized material-technical supply made it possible to maintain a high work tempo. For example, the Kalamkas-Karazhanbas-Shevchenko oil pipeline was laid much quicker than the normative period. To the deserted shore of the see there moved electric-power line towers and an extended motor road. At the place where only recently a small camp of geological prospectors had existed there rose up well-appointed special worker settlements. One after another, valves of wells were opened. In the last year of the 10th Five-Year Plan, a million tons of petroleum were produced.

The 15th Congress of the Communist Party of Kazakhstan specified that petroleum production for the republic reach 23 million tons in 1985; of these 18 are planned to come from Mangyshlak. Furthermore, the whole increase is to come from the accelerated start-up of oil fields on Buzachi Peninsula. During the present five-year plan, more than 230 million rubles of capital investment are to be used, and an entire complex of most complex organizational and technical measures is to be implemented, hundreds of operational and pressure [nagnetatel'nyye] wells are to be drilled, and facilities for the collection, preparation and transport of petroleum are to be completed.

At the 26th CPSU Congress, the need was emphasized for increasing the coefficient of withdrawal of petroleum from the depths. For this purpose, the deposits of

Buzachi Peninsula will be worked with the aid of thermal methods applied to the seam. Mangyshlak will employ for the first time in domestic practice and on an industrial scale such a progressive technology as pumping high-pressure steam into the seam and moist combustion within the seam.

Not all this work is proceeding smoothly, especially at the experimental sectors of the Karazhanbas deposit. The client--Mangyshlakneft' Association--is frequently late in issuing planning estimates. The amount of drilling on the peninsula is very large, but the drillers still do not have their own industrial base. This retards the rate of drilling work and lowers their quality.

The area of the Kalamkas deposit is boggy. Under these conditions, drilling trains are well recommended; they move along rows of raised dikes. Multiple drilling should be adopted more confidently.

The watch method of labor organization of construction workers, petroleum workers and drillers is being used on a wide scale on Buzachi peninsula. After working a 15-day stint, they are sent home on airplanes--to Makhachkala, Groznyy, Baku. This method has made it possible to save time and to quickly include with smallest outlays the petroleum of the new fields into national-economic turnover. But the Buzachi watch labor organization requires further improvement, especially the improvement of their cultural and everyday services. It is essential to speed up the lagging construction of the watch settlement at the Karanzhanbas deposit.

Regions directly abutting on the Buzachi group of fields are most promising in the search for oil and gas. Expansion of geological prospecting work in the areas of Mertvyy Kultuk and Kaydak is being held back by the fact that they are being flooded with the tide water of the Caspian. Construction is being planned of a protecting dike, but it will not solve all the problems; in spring and fall, the salt wastes are impassible. Neither drilling nor geological-prospecting machines can get through. Therefore, because of the absence of necessary materials and tools, downtime reaches 50 percent of worktime. One solution is possible--we have to build simple approach routes to the drill sites. The republic Ministry of Geology has the resources for this, but they are not being used. All this retards the tempo of geological prospecting work. We encountered a number of times Stanislav Zneverovskiy on the oil fields of Uzen'. When the development of the deposits of Buzachi Peninsula began, he with other of the best operators of Mangyshlakneft' Association was sent here. A great deal of experience, knowledge and skill helped organize life on the new field. Zneverovskiy was the first at Kalamkas to take over oil wells and put them in operation. With brigade leader Kisherbay Alibayev, he took over the first Buzachi petroleum.

Together with the operator, I leaf through the watch journal of the group installation. Zneverovskiy is satisfied; stable well debits, the above-plan count of recovery of the raw material is growing.

Buzachi rightfully is considered the main direction in growth of petroleum production volume. But a big part of the "black gold" of Mangyshlak is produced by the Uzen' deposit. After a number of years of reverses, the petroleum workers succeeded in stabilizing its operation. Last year, Uzen' workers fulfilled the plan for recovery of the raw material, while they are working with surpassed targets in the first year of the 11th Five-Year Plan. Among the decisive conditions of their success there should be included the increased amount of water pumped into the seam. But this work is constantly threatened with a breakdown because of damages to the Shevchenko-Uzen' water conduit. Worn out from years of operation, the conduit needs capital repairs and a practical 100-percent replacement of its pipes. At the same time, the maintenance workers are engaged in an endless patching of holes. The USSR Ministry of Petroleum Industry should look for opportunities of allocating the necessary quantities of pipe. The fact is that Uzen' provides more than one-half of Mangyshlak's petroleum.

Mangyshlak's workers have made a confident start in the first year of the 11th Five-Year Plan. They produced above the nine-month plan of recovery tens of thousands of tons of liquid fuel. The peninsula's petroleum workers have provided an enthusiastic response to the initiative of Tyumen' workers, approved by the CPSU Central Committee, in ahead-of-schedule fulfillment of the targets of the 11th Five-Year Plan for production of petroleum and gas. Among the right flankers of the socialist competition are to be find an operator of Uzen'neft' Administration and deputy to the 26th CPSU Congress, A. Kadymova, drilling foreman and Hero of Socialist Labor A. Yeremin and many others.

The Agrarian Belt

Almost 85 percent of the food products required by the oblast are brought to Mangyshlak from without. This figure eloquently speaks of the difficult climatic and natural conditions in which the industrial region is developing and of the low productivity of the agricultural fields. These conditions determine the specialization of the oblast's agriculture--animal husbandry. Mangyshlak produces high-quality karakul lamb skins and a large quantity of valuable camel wool. Growth in the production of these and other forms of animal-husbandry products, particularly meat and milk, is being held back by a poor fodder base.

From year to year, fodder is brought to Mangyshlak from other regions of the republic. Could this be avoided? In the opinion of specialists, it can. It requires the development of irrigation farming. The reserves of the prospected Severo-Aktau artesian basin will make it possible to significantly increase the procurement volume of sown grasses grown with the help of irrigation. Of course, this will require much in the way of capital outlays, but if one remembers that at the present time hay is transported thousands of kilometers to get to the peninsula, these expenditures would not appear to be excessive. At the present time, the share of sown grasses in the total fodder balance is less than 2 percent. During the past five-year period, the republic Ministry of Water Resources initiated on Mangyshlak a total of only 300 hectares of irrigated land.

The situation is aggravated by the implanted opinion of the worthlessness and uselessness of Mangyshlak land. The peninsula in length and breadth is worn with rutted roads, as the fertile layer of soil is removed with the caterpillars of tractors hauling drilling towers. Work on recultivation of the land is in an embryonic state. As a result thousands of hectares of pasture lands are taken out of circulation.

In recent years, there has appeared in sovkhoz tables of organization the position of agronomist. But here and there they have restricted themselves to this. Here is the experience of Sovkhoz imeni Kuybyshev, which indicates that it is possible to engage in vegetable growing under these conditions.

In the solution of the food program, the oblast's industrial giants can and should make a ponderable contribution. So far few subsidiary farms have been created, and they operate ineffectively. They hardly make use of secondary heat and effluent water.

The regional production complex's developmental program should provide a part for the development of an agrarian belt so that the settlement of Mangyshlak provides meat, milk and vegetables for the cities. At Tauchik settlement the creation of a camel-raising sovkhoz for the purpose of supplying oil workers on the Buzachi peninsula with nutritive camel milk constitutes the first step in this direction. It must be followed by others.

Mangyshlak possesses a complex of natural factors for the organization sanatorium-health resort treatment: no frost the whole year around, sandy beaches, a profusion of sun, reserves of mineral waters, therapeutic mud and the opportunity of being supplied with therapeutic camel milk and koumiss. And this question still awaits solution.

Problems of Development

"The bustle of a drawing of Mangyshlak"--this line of poetry not only emphasizes the industrial aspect of the peninsula. The poetic picture is also true in the sense that Mangyshlak has been for planners a kind of clean sheet of drawing paper. On this sheet there were drawn not only future roads and electric-power transmission lines but also the interconnections of production installations. How optimistic are they? The region's economy is marked by many examples of effective solutions by the planners. The gas refining plant that was built near Novyy Uzen' put out the flares that were aimlessly burning at the fields a valuable raw material. In addition, the enterprise helped petroleum workers to set up gas-lift recovery of the liquid fuel. For its production, the Shevchenko Plastics Plant uses an ethane fraction, obtained from concomitant petroleum gas as its initial raw material.

At the same time, there are also certain distortions and violation of proportions in the development of the oblast's economic sectors. Mangyshlak Regional Production Complex has enterprises of the gas-extraction, gas-refining and chemical industry. But the most important connecting links--petroleum refining and petrochemistry--are lacking, although many prerequisites and conditions exist for their development. Here are a few of them. As we know, Mangyshlak petroleum is very viscous. To make it more flowing, it moves heated the entire extent of the Uzen'-Kuybyshev petroleum pipeline. For this reason transport expenditures are very high. They can be avoided by building on the peninsula a refinery where paraffin could be removed from the petroleum.

The need for building a petroleum refinery on Mangyshlak has become more obvious with the discovery of deposits of the liquid fuel on Buzachi Peninsula. The fact is that the petroleums of these deposits contain many valuable components, which it would be advantageous to extract at the location. So far these components are not being used and go into fuel oil. Furthermore, the construction of the petroleum refinery would make it possible to solve the problems of a raw-material base for the Shevchenko Plastics Plant.

Specialists have no doubt that Mangyshlak has big potential possibilities for the further development of the oblast's chief sector of the economy--petroleum refining. This is shown by data on the presence of petroleum and gas in Permo-Triassic and Paleozoic strata, the "bottom story" of Mangyshlak. Moreover, both surface and aerospace geologo-geophysical studies make it possible to presume the presence of petroleum over a wide territory of wastes and in the shelf zone of the eastern shore of the Caspian. All these prerequisites require an expansion in the volume of prospecting drilling. So far they have been inadequately planned: for the five-year period, it is planned to increase industrial reserves of petroleum by less than it is planned to recover in these years.

Mangyshlak is experiencing an acute need for construction materials. The need for them is growing from year to year. New microrayons in Shevchenko and other cities and settlements must be built at a rapid pace. But brick, cement, gravel and bitumen are brought here from thousands of kilometers away despite the fact that the oblast has been shown to have the resources for many construction materials. From that same shell rock, it would be possible to set up the production of lime, portland cement, calcium carbide and soda ash. All the means exist for a sharp increase in the capacities of sawed-stone quarries and the production of wall and facing materials. The republic Ministry of Construction Materials Industry is slow in solving questions of development of Mangyshlakrakushechnik Association.

Ministries and departments whose interests cross at Mangyshlak give primary attention to increasing production capacities while forgetting about the necessity of creating a base for the construction industry. In the past five-year period, only three-tenths of 1 percent of the total volume of capital investment went into its development. All this is responsible for the fact that a significant portion of reinforced concrete components and carpentry items is brought in from other oblasts and republics of the country.

The brine produced from desalination of sea water is thrown back into the Caspian, which has an unfavorable effect on its preservation. At the same time, this brine serves as an excellent raw material for "gallurgic" production. According to calculations of specialists, the wastes from desalinating installations of Shevchenko can go into the production annually of as much as 80,000 tons of first-class sodium sulfate and 240,000 tons of common salt. Moreover, their production cost will be much lower than, for example, at Karabogazsul'fat Association.

Further development of the complex brings to the forefront the problem of power. The construction of generating capacities has been lagging behind present-day requirements, and an extremely difficult situation has been created in covering the electric loads of its consumers. This shortage will grow even with the start-up of new capacities as provided by the five-year plan. For this reason it would be advisable to include the regional production complex's power system, which so far has remained autonomous, into the system of West Kazakhstan and Central Asia.

What will Mangyshlak be like in ten or twenty years? Will it remain essentially a raw-material base or will the oblast's economy undergo comprehensive, full-blooded development? What will the region's specialization be in the system of public division of labor? What will the social infrastructure be like in this connection? The answer to these questions will be provided by the developmental plan of the regional production complex, the working out of which should be speeded up while strictly observing the principle of unity of sectorial and regional development.

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FUELS

DESCRIPTION OF OIL, GAS DRILLING OPERATIONS IN SAZHDAG

Azerbaijan Oil, Gas Exploration

Baku VYSHKA in Russian 21 Oct 81 p 1

[Article: "Drill Faster, Drill Better!"]

[Text] Prospecting for new oil and gas fields is in progress on the vast territory of Azerbaijan. As has already been reported by VYSHKA, in this republic's central area of Zardob, the persistent search has been successful -- the brigade of foremen Agagit Aliyev and Sayad Mamedov of the Gobustan URB [Exploratory Drilling Administration] has successfully sunk Well No 4, which is producing a commercial-quantity flow of crude. There is every reason to assume that new fields may be discovered in other central as well as western areas of Azerbaijan. Attention is focusing on the northwestern portion of Muradkhanly, the Amirarkh, Sazhdag, and Gyurzundag areas, the Palantekyan, Taredallyar and other structures.

The bulk of geological exploration and drilling activities are presently concentrated in these areas. It is the duty of leaders of reconnaissance parties, party and trade union organizations to mobilize the efforts of oil and gas prospectors to achieve all-out acceleration of the rate of well drilling and improvement in the quality of drilling operations. The discovery of oil and gas fields in the central and western areas of this republic will become a new and glorious page in the history of development of Azerbaijan land oil and gas production.

Today VYSHKA presents progress reports on the people who are searching for oil and gas in the Sazhdag area.

Inefficient Supply, Auxiliary Services

Baku VYSHKA in Russian 21 Oct 81 p 1

[Article by V. Gol'tsev, Akstafa-Sazhdag: "This Disturbs Drillers"]

[Text] My encounter with Alekper Alekperov at a remote site in the oil exploration area was not the first time we had met. He has been working in this area since the first drilling rig went into operation in the Sazhdag. His straightforward, upright character was revealed in clashes with difficulties, and his outstanding organizer abilities were revealed. The team of exploratory drillers have elected Alekperov trade union leader year after year for these qualities, and he endeavors to justify his comrades' faith.

A burden of civic work and the tasks of deputy chief of the Rayon Engineering-Technical Service No 3 -- all this places great responsibility on Alekperov. That day Rig No 4 reached a depth of 3420 meters, and at this depth they would be testing a Middle Eocene structure. And although there was no doubt that foreman Mardan Nuriyev, who was on duty that day, would do everything right, Alekperov decided to be at the rig personally, just in case.

"Georgian oilmen," he stated, "are producing crude from these beds in the Samgori area. I believe that here as well the formations at this depth, or below this depth, will produce."

Mardan Nuriyev is also optimistic about making a big oil strike in Sazhdag. In 1976 he struck an oil-and-gas pool in the Kalamatdin area together with drilling foreman Zakir Kafarov. They were also successful the following year, when the work force was named the top brigade in the branch, on the basis of nationwide socialist competition results. After that Mardan worked in Syria for two and a half years, in the Rumelan fields, and after returning home he decided to try his luck in Sazhdag. His partner, Asker Nazirov, also has had a good deal of practical experience. Wildcat well No 1, sunk by his brigade in the Demirtepe-Udabno area, was the first to determine the presence of oil and gas in this area. Both foremen work thoughtfully and with initiative.

"We have successfully employed so-called high rpm three-cone rock bits on hard rock of the Middle Eocene," said M. Nuriyev. "As a result, footage per bit has increased to 30-35 meters. In short, we endeavor to make maximum use of the capabilities of advanced equipment."

Acquaintance with the operation of the drilling crews, however, indicated that reserve potential for speeding up drilling operations is not yet being fully utilized. While gaining time on certain operations, the wildcat drillers lose time on others. Take, for example, the operation of weighting the drilling fluid. The entire cycle runs 2-2.5 hours. But frequently pebbles get into the fluid together with the barite, which instantly clogs the nozzle. This ruins everything. The rig workers must pour out two or three cubic meters of drilling mud and then begin the entire process again. This takes time, and in addition causes overconsumption of barite and expensive chemical reagents. What causes such wastefulness?

We visited the Saloglinskiy section, which is under the Ali-Bayramly area supply facility, from which all supplies needed by the drilling drews are hauled by rail to the end of the line -- pipe, barite, and various equipment. Hundreds of thousands of rubles worth of supplies and equipment are stored at this facility.

Quite frankly, however, the place is depressing. The old storage shed has been torn down, but no new one has been put up, and now expensive chemical reagents are stored haphazardly in one big pile, exposed to the elements. Of course by now they were completely unusable. Casing joints, new engines with transmissions, other equipment and spare parts were scattered all over the place. There is no reason to be surprised at all this. That day there was nobody at the supply facility except for excavator operator Ali Zeynalov, who had been sent here from the Gobustan Technical Transport Administration. From time to time dump trucks would drive up, at which time the equipment operator would take to the controls of his excavator. There is no special storage area for barite. After a rain the ground becomes so muddy that trucks and equipment working here at the end of the rail spur mix pebbles, which are scattered all over the storage facility area, in with the barite.

"In order to prevent pebbles from getting into the barite," stated RITS [Rayon Engineering-Technical Service] chief Asker Askerov, "we must convert over to using dry barite, particularly since the supply people had come up with this idea earlier. A long time ago they hauled in four 50-ton drilling mud preparation units, but they have not yet been set up. Equipment which is much needed by the drilling crews is standing around rusting."

A Gobustan Technical Transport Administration has been established in Poyly in the last five years. More than 20 trucks of various types are supposed to be meeting the needs of the drillers. But the problem of electric power supply has not yet been resolved. For this reason the garage still has no machine shop, battery charging station, and well-equipped truck fueling station. All this makes it very inconvenient to service vehicles and results in trucks wearing out prematurely.

Electric power supply to Sazhdag would make it possible to do away with diesel engines, servicing of which creates additional difficulties for the drilling crews. More vigorous efforts must be made to settle this important matter.

Oil and gas exploration between the Kura and Iori rivers is expanding year by year. And it is extremely important that preliminary prospecting not lag behind the drilling rate. This will help boost the pace of exploitation of the mineral resources of Sazhdag.

Kaflandere Wildcat Drilling

Baku VYSHKA in Russian 21 Oct 81 p 1

[Article by R. Babayev, chief geologist, land geological exploration office, Azneft' Association: "In the Kaflandere Area"]

[Text] Our team from the Azneft' Association's Land Geological Exploration Office is also taking part in the search for oil between the Kura and Iori rivers. Over the course of many years we have sunk dozens of holes as much as 1200 meters deep. The obtained material has made it possible to identify in this area the promising Sazhdag, Mamedtepe, Khatunly, Demirtepe-Udabno, Gyurzundag and other structures, to prepare the ground, so to speak, for deep exploratory drilling for oil and gas.

We have now begun intensive exploration in new areas of the Middle Kura Depression.

At the end of last year and beginning of this year, for example, we reached the promising Kaflandere structure, situated east of Sazhdag. Recently two holes 1800 meters deep each were completed here. Obtained data indicated that we had drilled into Maykop and Upper Eocene sediments, which are highly favorable for the accumulation of hydrocarbons.

This was confirmed by Well No 33, which was drilled by the crew of foreman Teymur Akhmedov. For the first time in this area, a commercial quantity flow of natural gas was obtained from Maykop sediments. Well observations indicated that it is producing a steady 50,000 cubic meters per day.

A similar producing formation was tapped by Well No 34, successfully drilled by the crew of foreman Bilal Kerimov.

We should like to say a few words of praise about rig mechanic Vidadi Babayev, drillers Gadir Gasanov, Dzhamal Mamishev, and Shakhvelat Askerov, and their assistants Alekper Muradov, Allakhverdi Dzhafarov, and Eyvaz Kurbanov, as well as motorman El'khan Mustafayev, who are doing everything possible in order successfully to accomplish their difficult tasks.

Exploratory Drilling Rate Increased

Baku VYSHKA in Russian 21 Oct 81 p 1

[Article by R. Ragimov, drilling foreman, Gobustan Exploratory Drilling Administration: "We Are Retaining First Place"]

[Text] Our brigade was one of the first to drill in the Dzheyranchel'skoye Uplands, where seismic prospecting had already revealed the presence of dozens of promising geologic structures.

One of them is the Demirtepe-Udabno. Last year we completed drilling exploratory well No 2 to a depth of 4100 meters. And although wellbore testing failed to produce positive results, this hole increased our knowledge of the new area and armed us with the ability more effectively to combat sloughing and absorption of drilling mud into the formation rock, which greatly complicate drilling and often cause equipment breakdowns.

Maykop sediments, which in this area run 1500 meters or more in thickness, are the most difficult to drill. The fact is that these soft rocks rapidly dissolve in the drilling mud, instantly worsening its quality and parameters. As a result the borehole walls swell, collapse, and if proper measures are not taken immediately, the sloughing rock will clog the bottom of the hole, and then the entire process begins anew. A graphic example of this is the first hole drilled in the Sazhdag area, where hundreds of hours were spent combating complications.

My partner, Gadzhi Zeynalov, and I thoroughly analyzed the mistakes made by the pioneer drillers when at the beginning of this year they began drilling exploratory well No 5 in the Sazhdag area, scheduled to go to a depth of 5100 meters. Thoroughly studying the geologic conditions, we concluded that the Maykop sediments, which could cause the most trouble in the entire wellbore, could be drilled faster than normal. Therefore from the very outset the tours of drillers El'dar Dzhafarov, Mamed Karayev, Agadzhi Kasumov and young party member Taptyg Makhmudov proceeded to devote more attention to the quality of the drilling mud, its chemical treatment and removal of cuttings. All this made it possible for us to reduce the density of the drilling mud by 14 hundredths below that specified by the preliminary data. As a result, on the one hand we saved a large quantity of barite, while on the other hand we achieved an increase in the fluid power of the pumps and at the same time an increase in the drilling rate.

Results were good. The target for the first nine months of this year was achieved by 105.3 percent. The wellbore depth of 2785 meters was reached ahead of schedule. Particularly gratifying is the fact that out here, prospecting at remote field locations, our work force is retaining first place in socialist competition among the drilling crews of Rayon Engineering-Technical Service No 3 for ahead-of-schedule completion of the annual plan target.

We shall state quite frankly that we can achieve more. The drilling rate, for example, has increased by only three and a half percent since Well No 5 began making hole. And yet more could be achieved if we could reduce drilling crew downtime waiting for spare parts, tools, and pipe. For this reason I believe that it is extremely important to establish in the community of Poylu, where our oil exploration operation is headquartered, a pipe and tool depot section. This would enable all drilling brigades, and their number will soon increase to five, to operate more efficiently.

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CONSTRUCTION DEFICIENCIES AT KANSK-ACHINSK COAL BASIN CITED

Moscow UGOL' in Russian No 9, Sep 81 pp 7-9

[Article by L. G. Sizov, 2d Secretary of the Krasnoyarskiy Kray CPSU Committee: "Pay More Attention to the Development of KATEK [Kansk-Achinsk Fuel-and-Power Complex]"]

[Text] The Communist Party of the Soviet Union and its Leninst Central Committee under CPSU Central Committee General Secretary Comrade L. I. Brezhnev are persistently executing a strategy of accelerated development of the productive forces of the country's eastern regions. In effecting this strategy, a special role belongs to Krasnoyarskiy Kray, which possesses enormous natural resources: 40 percent of the country's explored geological reserves of coal, 13 percent of the effective hydroelectric resources, 18 percent of the nation's reserves of high-grade timber, and great reserves of ferrous and nonferrous metal ores and of quarried nonmetallic mineral resources. Natural gas has been found and is widely used, and there is every reason to hope that, with adequate promotion of geological exploration, oil deposits will be discovered in the kray.

A successful combining of power-engineering and other natural resources will promote high effectiveness in their use in the national economy with the priority development in the kray of energy-intensive production. At the start of the 1970's the CPSU Central Committee and the USSR Council of Ministers adopted a decision to develop Krasnoyarskiy Kray's production forces in integrated fashion. Ways for the dynamic and proportional development of the kray's economy, based upon the assimilation of natural resources and the creation of high-capacity electric-power and large power-intensive production facilities, were defined with scientific validity.

During the past decade industrial production volume in the kray rose 2.3-fold over 1961-1970's, and more than 25 billion rubles of capital investment were assimilated. The coal industry has been developed at a rapid rate. In 1980, 41.7 million tons of coal were mined, that is, coal mining rose by more than 70 percent over 1970's. Through the rebuilding of existing enterprises and introduction of the industrial-test Berezovskiy Strip Mine, the productive capacity of the Krasnoyarskugol' Association increased by 17.2 million tons and was more than 40 million tons at the start of the 11th Five-Year Plan. A program for reequipping the association's enterprises is being carried out, and new and highly productive machinery is being introduced successfully.

A powerful industry, mechanized agriculture and advanced science have been created in the kray, the material well-being of the workers has risen greatly, and the prerequisites for further intensive and integrated development of the productive forces have been created.

The CPSU Central Committee and the USSR Council of Ministers pay much attention to the economic and social development of Krasnoyarskiy Kray. During the 11th Five-Year Plan, in accordance with 26th CPSU Congress decisions, the fuel-and-power complex is to be developed at an even higher pace, and new large power-intensive production facilities for ferrous and nonferrous metallurgy, chemicals and petrochemicals are to be established on the basis of it. Coal mining is to increase substantially by 1985, and it is to be conducted primarily by the surface method.

Machinebuilding that is specialized in the output of machines and mechanisms for operation under Siberian and Far East conditions will be further developed in the kray. The introduction of the first phase of the Krasnoyarsk Heavy Excavator Plant in 1985 will enable 40 EKG-12.5 excavators, two ESh-40/85 draglines and one rotary complex with a productivity of 5,250 cubic meters per hour to be produced. The Minusinsk complex of electrical-equipment industry plants and plants of the timber, wood-processing and pulp-and-papermaking industry, with intensive processing of timber, will be developed at a rapid pace.

A high pace in the development of light industry, the food industry and other branches of industry that are called upon to satisfy the populace's need for food products and industrial commodities is called for.

The 26th CPSU Congress's decisions attribute special importance to the creation of the Kansk-Achinsk Fuel-and-Power Complex, including supercapacity coal strip mines (up to 60 million tons per year) and the largest of thermal electric-power stations (6.4 million kilowatts each). Moreover, railroad lines, yards and terminals, building-materials and construction-industry enterprises, production bases for construction and installing organizations, highways, electric-power transmission lines, communications lines and other facilities should be built within the complex. A new city of coal-industry workers and power-engineering workers has appeared on the map in place of the Sharypovo settlement, and its first housing has already been occupied. A major program for developing agricultural production in the KATEK zone in order to provide construction and operating workers with food products also will be executed.

It should be noted that a component part of the program for Krasnoyarsk's second decade is the creation of the Kansk-Achinsk Fuel-and-Power Complex. The development of the kray's economy is based upon growth of the electrical potential of the Krasnoyarsk Power System through not only the assimilation of hydroelectric power resources but also the introduction of KATEK's GRES's into operation.

Creation of the complex is a task that involves a multiplicity of plans and branches of the economy. Its resolution calls for deep qualitative changes in the kray's economy and creation of the prerequisites for a dynamic balance in developing the productive forces of the Kansk-Achinsk Regional Production Complex and of the whole kray.

The tasks for realizing the decision to create KATEK that have been adopted by the party and the government were discussed at a meeting of the kray's party and economic activist members, with the participation of managers of the concerned ministries and agencies. Specific measures were called for. A coordinating council was formed under the party's kray committee, which will examine regularly at its meetings questions of the design and construction of the complex's enterprises and facilities. Deputy USSR ministers of the coal industry, power and electrification, transport construction, railways and installing and special construction work, managers of design and scientific-research institutes that are working on problems of establishing the complex, and supervisors of the kray's party, soviet and economic organs will take part in the coordinating council's work.

The kray's CPSU committee keeps constantly in mind the activity of all the collectives that are taking part in creating the complex. A scientific and technical conference, "The Equipment and Technology of KATEK in Light of the Tasks of the 26th CPSU Congress," was held at Krasnoyarsk in May 1981 with the participation of representatives of many of our country's krays and oblasts.

Agreements for the creative collaboration of scientists, designers, builders and other participants in creating the complexes have spread widely at KATEK construction projects. Party committees and bureaus and councils of primary party organization secretaries have been created in the main construction organizations that are participating in construction of the complex's enterprises and facilities, and an industrial-transport section has been established in the Sharypovskiy Rayon party committee. The kray's party committee has worked out and approved a program for ideological support of KATEK construction.

The coal industry and power-engineering are the complex's leading branches of industry. But it would be incorrect to view the creation of KATEK as a simple quantitative buildup of the productive capacities of these two branches of the national economy. Success of the construction and effectiveness of the functioning of the complex's enterprises depends greatly upon the timely forming of the production and nonproduction infrastructures and arrangements for integration in development of the whole KATEK zone. USSR Ministry of Coal Industry and USSR Ministry of Power and Electrification have the leading role in this important matter. Constant concern about the integrated development of the region and initiative in questions of coordinating the activity of all the concerned ministries and agencies are required of the managers of these branches.

A multitude of scientific and technical problems are arising during the creation of KATEK, without the solution of which it is impossible to provide for high capital-investment effectiveness in its construction. Science, which is to solve complicated tasks of an industrywide and interindustry nature, has a special role here.

It is necessary to create in a short time new models of highly productive equipment, to study scientifically and to support technically the 1,150-kilovolt power-transmission line, and, in accordance with the results of scientific research, to develop a technical and economic foundation for KATEK's development, based upon the utilization of Kansk-Achinsk coal for power and chemicals. Several technologies for processing this coal have been created that will enable a whole range of chemical products, aside from refined solid fuel and artificial liquid fuel, to be obtained. However, studies of their economic effectiveness are still far from completed. The feasibility study for the development of KATEK during the second stage should be worked out in 1985 on the basis of this research. Studies of methods for transforming the energy of Kansk-Achinsk coal should be developed more energetically. A precise program for using the ash and slag from KATEK's GRES's still has not been developed. Questions about preserving the environment require further fundamental study. Not by far have all the questions about creating a specially built boiler unit with a productivity of 2,560 tons of steam per hour, based upon the use of Kansk-Achinsk coal, been solved.

Among the problems of creating the coal portion of the complex, the development and series output of apparatus for detecting hard inclusions in stripping rock, of preventing the adhesion and freezing of stripped rock to the buckets of rotary excavators, the integrated utilization of stripped rock, and the development of more effective flowline and cyclic-flowline flow sheets are important.

The lag that has been noted in the scientific developments that are executed by USSR Minugleprom institutes with regard to some technical and technological problems occur, in our view, because these institutes are located far from the Kansk-Achinsk Coal Basin, yet the problems of its development are their main and priority concerns. At the same time, the high pace of development of coal mining in the Kansk-Achinsk basin requires a deep scientific study of all questions of a technical, technological and organizational nature. For this purpose, the basin needs an independent branch institute. In 1979, with the active participation of the kray's scientific and technical society, recommendations were worked out for the guidance of this institute's work, which the USSR Ministry of Coal Industry confirmed. However, the design of the institute's building, which should be built in 1982-1984, still has not been undertaken.

Slowness in establishment of the institute brings on additional difficulties and hinders the development of research into the integrated use of Kansk-Achinsk coal.

More than 30 ministries and agencies are participating in the construction of KATEK enterprises and facilities and in the creation of equipment, machines and mechanisms for it, and more than 100 institutes are doing scientific research and design-development work on the complex's problems. As a result of measures taken in 1979-1980, the lag in design was eliminated, and construction volume for 1981 has been supported completely by design and budget-estimating documentation. However, the ceilings on the design work that were assigned to Krasnoyarskugol' Association for 1981 do not provide completely for the backlog of documentation work that is necessary for the 1982 volume. During the five-year plan it is desirable to work out for USSR Minugleprom institutes an appropriate schedule for the fabrication and issuance of designs and of budget-estimating documentation for enterprises and facilities for the coal portion of the complex.

Questions of the deliveries of equipment to the Berezovskiy Strip Mine No 1 are being solved slowly. The design calls for flow-line technology for excavation and stripping operations, using rotary excavators, conveyor transport for coal and stripped rock, with transfer of the stripped rock into excavated space by means of reloaders and spreaders. The ERP-5250 mining complex was designed at the Novo-Kramatorsk Machinebuilding Plant and manufactured at the Zhdanov Heavy Machinebuilding Plant. The delivery of 1,500 tons of components for this excavator was disrupted in 1980. Questions of the design for the OShR-5250/95 spreader and the PG-5250/120 reloader and of the design development of belt conveyors and of machines for shifting tracks and belt conveyors have not been solved, and the date for delivering the DG-5250/60 reloader has been postponed.

Delay in the design, manufacture and delivery of the complex of mine-transport and auxiliary equipment for stripping and mining operations can threaten the introduction of coal-mining capacity at Berezovskiy Strip Mine No 1 with interruption, for the operating schemes adopted exclude the possibility of using temporary solutions of any kind.

KATEKuglestroy [KATEK Coal-Mine Construction Combine] was created in July 1979, based upon the Berezovskiy Strip-Mine Construction Administration of the Krasnoyarskugol' Association for the construction of enterprises and facilities of the coal portion of the complex. This administration did 1.5 million rubles' worth of building and installing work in 1978 without having its own construction base. In 1980 the combine did 11 million rubles' worth of construction and installing work, and the manning of its collective had grown to 2,000 people by the start of the 11th Five-Year Plan. The management of KATEK's construction organizations is receiving many letters from those wishing to take part in this majestic construction project, but the potential for receiving them is extremely limited because of the housing shortage.

Problems of the accelerated construction of a new city and of an increase in the housing inventory are causing serious concern on the part of the kray's party committee. Calculations indicate that 600,000 square meters of housing should be introduced and facilities for social, cultural and domestic-amenity purposes should be built prior to startup of the first power unit and introduction of the first phase of Berezovskiy Strip Mine No 1 in the new city of miners and power workers. Since the start of construction, little more than 60,000 square meters of housing space has been introduced. USSR Minugleprom organizations which have transferred to the procedure for shared participation for about 26 million rubles still have not received a single square meter. It was proposed during the initial stage of construction of the complex's coal portion to house the builders in a new settlement that was being built by KATEKuglestroy Combine forces, which was made up of factory-built wooden houses, for which all the necessary facilities for social, cultural and domestic-amenity purposes were specified. Later the strip-mine builders and workers of Berezovskiy Strip Mine No 1 should be settled in the new city of miners and power workers. The two ministries have not been able to solve the problem of the distribution of the housing among their organizations. In 1981 the combine should do more than 23 million rubles' worth of construction and installing work, concentrating labor and material resources on construction of the settlement and the support base. During 1980 the worker manning of the combine rose from 400 to 2,000. The pace of growth has been substantial, but it is not in keeping with the tasks for accelerating establishment of the complex.

There are serious deficiencies in organizing work during construction, in the supplying of materials and equipment, and in organizing socialist competition. The lag in the construction of spur tracks and in rebuilding the existing railroad yard in the KATEK zone is greatly complicating the work of the builders of the coal and power portions of the complex. USSR Mintransstroy [Ministry of Transport Construction] is slow in building up the capacity of its organizations, and each year it receives only half of the design documents proposed and supplied for work on the complex's facilities. The lag in rail development of the KATEK zone does not support even today's work volume with respect to the normal acceptance of the freight that arrives at the construction project, and it leads to idle time for cars waiting to unload. The program for road construction in the zone's complex also is being implemented poorly.

The program for developing coal mining in the Kansk-Achinsk basin called for the construction of Irsha-Borodinskiy Strip Mine No 2. The coal of this strip mine was intended to meet the requirements of the block of power stations and the industrial boilers of Krasnoyarsk city, the eastern part of the kray, and Irkutskaya Oblast. The engineering design for the strip mine has not been developed, and construction of the support base has not commenced. The question of creating in the Borodino settlement a high-capacity specialized construction organization of USSR Minugleprom for the construction of this strip mine and, in the future, also of other facilities and enterprises for the eastern wing of KATEK, still has not been solved. Experience in creating KATEKuglestroy Combine has shown that at least a year is needed for developing operations for newly created construction organizations. Slowness in creating a construction organization for KATEK's eastern wing is leading to a loss of time which cannot, by far, always be made up.

Thus, a precise program of operations in all areas of KATEK's creation within the framework of the five-year plan and strict monitoring over progress in its fulfillment are needed. The first steps that have been taken in the creation of enterprises and facilities for the coal part of the Kansk-Achinsk Fuel-and-Power Complex display serious deficiencies in this major, important work. The party's kray committee and the kray party organization are taking steps to improve the work of the participants in the construction of the complex and to guide kray organs toward the accelerated solution of all problems that arise during construction. A more precise coordination of the actions of all organizations that are taking part in scientific studies and in the design and construction of enterprises and facilities for the coal portion of KATEK, also on the part of USSR Minugleprom, is necessary.

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ACTIONS NEEDED TO BUILD UP KANSK-ACHINSK STRIP COAL MINES ITEMIZED

Moscow UGOL' in Russian No 9, Sep 81 pp 24-27

[Article by Candidate of Economic Sciences V. V. Taskayev, general director of Krasnoyarskugol' Association: "The Kansk-Achinsk Fuel-and-Power Complex"]

[Text] "The Main Directions for the Economic and Social Development of the USSR During 1981-1985 and During the Period up to 1990," which was adopted at the 26th CPSU Congress, assigned the country's coal-industry workers a huge task: "Develop coal mining by the more effective surface-mining method, based upon the wide introduction at an overwhelming pace of progressive technology and mine-transport equipment of great unit capacity. Speed up the creation of capacity in the Kuzbass [Kuznetsk Coal Basin], the erection of facilities for the Kansk-Achinsk and Ekibastuz Fuel-and-Power Complexes, and increase in the mining of coal in these regions."

The Krasnoyarskugol' Association collective is making a considerable contribution to the development of Siberia's fuel and power base. Its role will grow constantly as the program for creating the Kansk-Achinsk Fuel-and-Power Complex is implemented.

The Berzovskoye, Uryupskoye, Itatsko-Barandatskoye, Achinskoye and Nazarovskoye fields are of the greatest industrial importance in the western part of the basin, the Irsha-Borodinskoye and Abanskoye fields in the eastern part. Total reserves explored to depths of 600 meters have been evaluated at 670 billion tons, including about 140 billion tons of the inventory that is suitable for strip mining. All the fields are represented by a thick coal seam, basically of simple structure and of horizontal or slightly inclined (2-9 degrees) bedding. The largest fields--the Itatskoye, Berezovskoye and Bogotol'skoye--are characterized by great length of the seam (up to 60 kilometers), its thickness fluctuating between 6 and 96 meters. The coal of all the fields is of the typical brown grade B. The ash content of clean coal is 6-12 percent, moisture content 32-45 percent, sulfur content less than 1 percent, and the heat of combustion of the working fuel is 13,020-15,560 kiloJoules per kilogram.

The prospects for developing coal mining in the basin is determined by two basic factors: a growth in demand for solid fuel by thermal electric-power stations, whose energy will be transmitted to the Urals and the European part of the country; and the potential of Kansk-Achinsk coal for integrated processing as a raw-material resource for the chemical and petrochemical industries, and also for the production of liquid motor fuel.

The creation of the Kansk-Achinsk Fuel-and-Power Complex, including the high-capacity strip mines, thermal electric-power stations and coal-processing enterprises, is of great national-economic importance for the further development of Siberia's productive forces and the country's fuel and power base.

The complex is to be formed in two phases. The following should be accomplished during the first phase: the rebuilding of the two existing strip coal mines and the construction of three new ones (bringing their total capacity up to 150-160 million tons of coal per year); the construction in direct proximity to the strip coal mines of two thermal electric-power stations with capacities of 6.4 million kilowatts each; and the creation of an industrial-test installation for the processing of coal, a production base for construction work, facilities for rayonwide purposes, and housing and public buildings.

During the second phase of forming KATEK, additional strip coal mines and thermal power stations are to be introduced, prime enterprises for processing the coal are to be built, and the amount of housing and public-building construction is to increase.

The level of coal mining in the Kansk-Achinsk basin is to be brought up to 50-55 million tons in 1985.

In order to meet the estimated demand for Kansk-Achinsk coal, it is planned to complete the rebuilding of the existing Nazarovskiy and Irsha-Borodinskiy Strip Mines, bringing their total capacity up to 38 million tons per year, and the construction of the new Berezovskiy No 1, Irsha-Borodinskiy No 2 and Uryupskiy Strip Mines, with a total capacity of 148 million tons. In order to create the required capacity for mining coal in the long term, Itatskiy Strip Mine No 1, Itatskiy Strip Mine No 2 and Berezovskiy Strip Mine No 2 are to be introduced, with a total capacity of 160 million tons per year (see table).

The Kansk-Achinsk basin's strip mines will surpass the most advanced enterprises of the industry in their technical and economic indicators, and, in so doing, labor productivity per coal mine worker will reach 2,800 tons per month, which is 2.5-fold that now existing; and the prime production cost per 1 ton of coal (including expenditures for transporting it to the GRES) will be 1.5-2 rubles.

At most KATEK strip mines continuous-action equipment and flowline technology for the mining work will be used in mining and stripping operations. For purposes of working the strip mine fields, a block procedure has been adopted, with the mining operations developed from the outcropping of the working coal seams under the overburden, with later advance of the work front along the dip of the seams. Primarily, blocks are to be introduced that will enable the strip mines to be worked in the first years of their operation at a minimum stripping factor. The average length of the mining work front of the initial strip mines will be 4-8 kilometers, of individual blocks--2.4-4.5 kilometers, and, in so doing, the annual pace of advance will be 90-200 meters. In the first 10 years of operation of the strip mines, the stripping factor has been 1 cubic meter per ton.

The stripping of future mine areas of KATEK strip mines calls for two flank trenches (for placement of rock in heaps) and one central exit trench (for dispensing the coal), as well as strip-mining trenches along the outcrops of the working coal seams under the overburden. For mining coal, a conveyor system of development

Indicators	Strip mines							
	New						Rebuilt	
	Berezovskiy No 1	Uryupskiy	Itatskiy No 1	Itatskiy No 2	Berezovskiy No 2	Irsha-Borodinskiy No 2	Nazarovskiy	Irsha-Borodinskiy
Annual productive capacity for run-of-mine coal, millions of tons	55	53	50	60	50	40	13	25
Annual amount of stripping work, millions of cubic meters	25.7	137.8	45.0	30.0	95.0	38.0	39.4	26.0
Current stripping factor, cubic meters per ton	0.47	2.60	0.9	0.5	1.9	0.95	2.46	0.92
Labor productivity per worker, tons per month	2,740	1,628	2,330	2,850	1,480	1,680	1,142	1,300
Prime production cost per ton of coal, rubles	1.25	2.92	1.75	1.55	2.51	1.98	1.46	1.24

will be employed that will involve the use of powerful ERShRD-5250 rotary excavators, ERS-1120 chain conveyors, and wide-belt (1,600-2,500 mm) conveyors of the appropriate productivity; for stripping work on two lower benches with a total thickness of 50-55 millimeters--a conveyor-and-spreader system; and, for all the overlying horizons--a conveyor system. For stripping rock with hard inclusions, a cyclic flowline technology is called for which uses EKG-12.5 and EKG-20 power-shovel excavators, self-propelled crusher units and belt conveyors, and, at the spoil heaps, OShR-5250/190 and OShR-5250/95 spreaders.

During the past decade (1970-1980) the amount of coal mined by the association rose by 17.9 million tons, or 1.7-fold, aided by the development of mining at the Kansk-Achinsk basin's strip mines, the share of which increased from 76 to 83 percent of the total mined by the association.

In developing the Nazarovskoye field, basically two systems are being used--a conveyor system that uses single-bucket excavators and rail transport, and a nonconveyor system that uses walking draglines (ESh-100/100, ESh-10/60 and ESh-15/90). The coal seam is worked by ER-1250 rotary excavators. The prime production cost per ton of coal at the strip mine is 1.37 rubles, and labor productivity per worker is 1,142 tons per month.

The Irsha-Borodinskoye field is being worked almost completely according to the conveyor system of development, and, because of the low stripping factor (1.15 cubic meters per hour), the technical and economic indicators here are good: the prime production cost is 1 ruble and 31 kopecks; and labor productivity per mine worker is 1,210 tons per month.

Higher rates of growth in production were achieved during the 10th Five-Year Plan. Growth in mining for the five-year plan as a whole was 29.2 percent, or 44 million tons, including that of the Kansk-Achinsk basin strip mines, which was 33.7 percent, or 40 million tons. In 1980 the average monthly productivity per mine worker at the association's strip mines reached 665 tons, but in the Kansk-Achinsk basin--805.4 tons; the prime production cost per ton of Kansk-Achinsk coal was 1 ruble and 50 kopecks.

The collective's success in building up coal-mining volume and in fulfilling the state plan were made possible thanks to further reequipping of the strip mines with machinery when they were being rebuilt, to the large-scale socialist competition to complete 10th Five-Year Plan tasks ahead of time, and to the dissemination and introduction of the experience of advanced production workers. During the preceding five-year plan alone the excavator pool at the strip mines was renewed by 50 percent. Twenty-five EKG-8i, eight ESh-10/70, two ESh-15/90 and one EKG-12.5 excavators were received and put into operation. The average bucket capacity of the assigned single-bucket excavators increased from 5.3 to 8.9 cubic meters. When stripped material is loaded into rail transport, basically EKG-8i excavators are used, while at the Irsha-Borodinskiy Strip Mine the EKG-12.5 excavator has been assimilated.

During the 10th Five-Year Plan the ESh-100/100 walking excavator was assembled and put into operation under a conveyor-free system at the Nazarovskiy Strip Mine. In 1980 about 13 million cubic meters of overburden were moved and 6 million tons of coal were prepared.

Four ER-1250 and one ERShRD-5000 excavators were put into operation for mining work during the preceding five-year plan. In 1980, while the ERShRD-5000 was being mastered, about 5 million tons of coal were loaded. The level of coal mining by multibucket excavators has been brought up to 90 percent at the Nazarovskiy Strip Mine, and up to 60 percent at the Irsha-Borodinskiy Strip Mine. The average productivity of assigned rotary excavators was 3.4 million tons, exceeding the industry average by 9.4 percent.

New types of cutting tools were tested and introduced for drilling work, along with introduction of the 2SBR-125 and BTS-150 drills.

TE-3 and TEM-7 diesel locomotives and VS-136 and VS-180 dump cars were introduced into operation for rail transport, conversion to R-65 rails was accomplished, switch control was centralized, and means for mechanizing track work and auxiliary processes were introduced. In 1980, 61.4 kilometers of rail lengths were assembled and repaired by rail-length assembly bases.

In recent years, with the introduction at strip mines of new equipment, of loading and transporting equipment, and of repair enterprises, the number of skilled specialists who are successfully assimilating the new equipment and who are using it skillfully has risen.

Party and government have planned a vast program of operations for creating the Kansk-Achinsk Fuel-and-Power Complex. Tens of design institutes, contracting construction organizations and machinebuilding plants are participating in the realization of this program. For KATEK's coal portion alone, about 1 billion rubles of capital investment will have to be mastered during the 11th Five-Year Plan. Along with the construction of large strip mines, construction-industry and building-materials facilities, enterprises for processing coal, a plant for repairing mining and transporting equipment, a motor-vehicle repair plant, a number of facilities of rayonwide importance, utilities, service and transport lines, and about 1 million square meters of housing space and of facilities for social, cultural and domestic amenity purposes are to be erected.

To introduce the first phase of the Berezovskiy Strip Mine, more than 170 million rubles' worth of construction and installing work and an increase in the builders' collective will be necessary. However, work on the design, manufacture and delivery of operating equipment for this strip mine are lagging.

Design ceilings should be assigned and specialized construction organizations of the KATEKuglestroy Combine should be created in the nearest future in the Borodino settlement with a view to undertaking the erection of facilities for Irsha-Borodinskiy Strip Mine No 2. This will enable the demand for coal by the rapidly developing cities of Siberia's power workers to be satisfied.

Major tasks will confront the association's collective with regard to completion of the rebuilding of Irsha-Borodinskiy Strip Mine No 1, as a result of which its capacity will be increased from 20 to 25 million tons. In the next 2-3 years it will be necessary to provide for the delivery of 5-6 EKG-12.5 type excavators for stripping work, for a buildup in stripping volume to 28-30 million cubic meters per year, and for elimination of the lag that had been permitted in preceding years. Moreover, the strip mine will have to be rigged with a set of track machinery in accordance with the operating schemes for laying track. Computations indicate that, with the introduction of standard technology for track-relaying operations and the delivery of new equipment to the strip mine, the share of mechanized work will be increased from 27 to 34 percent, and the labor intensiveness of tracklaying reduced by 20-25 percent.

Problems of no little importance are the most rapid completion of construction of a second connecting track between the Ugol'naya and Buynaya Railroad Yards and the introduction into operation of an administration and amenities combine at the Irsha-Borodinskiy Strip Mine No 1.

The collective of the Nazarovskiy Strip Mine, whose reserves are being worked, face special tasks. The whole activity is to be relocated to the Achinskiy and Chulmyskiy sections, which are under construction in the western part of the field. This relocation must be done without reducing the level of recovery.

When such a large fuel-and-power complex as KATEK is created, the highly important problem of preserving the natural environment arises. The strip coal mines will destroy 300-500 hectares of arable land, the thermal power stations will discharge substantial amounts of harmful substances into the air, and thousands of cubic meters of water will be required annually for the operation of KATEK's facilities. Therefore, the development of scientifically substantiated recommendations for preserving the environment should find precise solution in the plans for the enterprises and facilities of the Kansk-Achinsk Fuel-and-Power Complex that are being built.

Unsolved problems remain: drives against the adhesion and freezing of rock to the structure of conveyors and conveyor belts, the destruction of large inclusions in stripped rock, and the technology for working slightly inclined (less than 5 degrees) coal seams by rail-mounted walking rotary excavators, the prevention of the freezing of assembled lengths of movable tracks to the earthen roadbed, the creation of reliable machinery for drilling holes in rocks that alternate in strength, to a depth of 50-60 meters, and pipeline and conveyorized transport over great distances, the provisioning of reliable firefighting equipment and protection of the mining equipment against dust, and the integrated use of stripped rock and sooty coal.

A large number of ministries and design and scientific-research institutes are taking part in building KATEK facilities. Because of this, there is an urgent necessity for creating an interagency organ for managing KATEK, with broad powers for coordinating operations, planning, and distributing labor, material and financial resources among the construction participants.

In order to solve successfully the tasks defined by the 26th CPSU Congress with regard to establishing the Kansk-Achinsk Regional Production Complex and to fulfill on time the tasks for introducing capacity in the Kansk-Achinsk basin, all ministries and agencies must reinforce the construction organizations that are erecting KATEK facilities. It is desirable that USSR Minugleprom raise the ceilings on design work, in order to provide for the timely development of documentation: for the working design of facilities for Berezovskiy Strip Mine No 1, for the design of Irsha-Borodinskiy Strip Mine No 2 and of facilities of rayonwide significance and of the city of Sharypovo, for the upkeep of capacity of the Nazarovskiy Strip Mine, for repair plants and bases, for the installation for producing synthetic fuel, and also for an engineering-laboratory building in Krasnoyarsk. The creation and manufacture of mine-transport equipment--a stripping complex with spreaders and reloaders, face and arterial conveyors, and cold-resistant cable-reinforced conveyor belt--must be speeded up.

Solution of the problems posed will enable execution of one of the most important tasks for developing the country's economy during the 11th Five-Year Plan--the creation of the Kansk-Achinsk Fuel-and-Power Complex--to be speeded up.

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FUELS

GEORGIAN COAL MINE PROGRESS, PROBLEMS DESCRIBED

Tbilisi KOMUNISTI in Georgian 12 Aug 81 p 2

[Article by Tkibuli Lenin Mine Party Committee Secretary A. Kochiashvili under rubric "Effective Socialist Competition": "Communists' Personal Example"]

[Text] Along with other Tkibuli enterprises, the Lenin Mine's collective is actively involved in socialist competition to complete the 11th Five-Year Plan ahead of schedule. Every worker and technician in this standard-bearer of the republic's coal industry is doing his bit to ensure success.

After the 26th CPSU Congress, the mine launched a movement with the slogan "The Five-Year Plan in Four Years!" The initiator was mineworker Spiridon Birkaia, a delegate to the 26th CPSU Congress and a member of the GCP CC. He pledged to fill a five-day coal production norm every four days.

The initiative was approved and taken up by integrated mineworker crew members of units headed by N. Kuprashvili, U. Gvenetadze, and V. Chkhenkeli. To make it more massive in character, we called an expanded party committee meeting, attended by operations section and shift chiefs, integrated crew leaders, and mine activists. A businesslike discussion and exchange of ideas was held. In order to publicize and spread the initiative, we assigned agitators to carry out interpretive and explanation work, going right down into the mines to talk to the workers about the benefits the mine would gain by spreading S. Birkaia's work experience. As time went on, the movement took flight. More and more operations sections, crews, and rank-and-file miners joined in. As always, communists were the heart and soul of the effort. The 300-man team overcame difficulties and strove to reach the higher goals of the five-year plan. Communists always worked in the front lines of the struggle for more coal, deep in the ground where the fate of the people's wealth is decided.

The first outstanding results were not long in coming. As soon as the 26th CPSU Congress ended, the mine's collective began to do shock labor, and coal production figures climbed.

The other day, at the suggestion of the mine chief, Tkibuli Gorkom Buro member G. Tsakadze, the party committee and the mine's administration held a check-up to see how the enterprise had benefited from S. Birkaia's labor initiative. The results were positive. The mine collective completed state targets for the production of coking coal nine days early, and is now working on the second 10 days of August. More than 14,700 tons of coking coal have been produced over and above the plan--twice as much as socialist obligations called for.

In the first half of the economic year, the Lenin mineworkers produced 25,000 tons more coal than in the same period last year, with the same number of workers. Daily loadings per workface were increased by 2.9 percent over plan figures, and strict conservation compliance made it possible to reduce the prime cost by 60 kopecks per ton. This alone added 194,271 rubles to the mine's "coffers."

The greatest contribution to this success was made by the operations sections headed by communist miners B. Chapidze, R. Kikoliashvili, K. Kelauradze, and V. Samakashvili. Credit also goes to rank-and-file miners G. Vardosanidze, N. Giorgadze, R. Chankvetadze, E. Chapidze, Sh. Santeladze, Z. Dzhanelidze, O. Glunchadze, L. Bubashvili, K. Bedinadze, and others. They have been making 1.5 to 2 norms of coal production every day.

Recently the mine's party committee reviewed its year's work plan and made a number of substantial changes. On the basis of a specific plan of action we dealt with essential matters stemming directly from L. I. Brexhnev's directives and the decree of the Third GCP CC Plenum. Now the party organization is paying more attention to the task of putting production reserves to work, strengthening labor and implementation discipline, ensuring strict compliance with safety regulations, improving product quality, making better use of mining machinery and equipment, eliminating absenteeism, and so on. Lately we have made more effort to see to it that not a single instance of idleness, tardiness, or technological discipline violation goes without prompt, businesslike follow-up.

We are doing this because our mine's operations sections and integrated work crews are by no means pampered in terms of the number of personnel. Almost every production link suffers from a shortage of workers and technicians. The section party organizations and the mine administration have introduced a printed form which reads "Notice to a Goldbricker's Family." We send it to the wife or parents of a worker who doesn't show up for work, noting on it exactly how much money he has cost his family in wages or bonuses. We have also instituted "Labor Discipline Day" and set up a commission to study the causes of labor turnover, headed by communist M. Kakushadze, assistant to the mine director. Commission members make a detailed study of individual cases of workers leaving the mine and do their best to keep them.

These efforts have yielded results, but there is much more to be done. Above all we must do more to improve working and living conditions. We have to admit that many mineworkers' families still live in substandard and cramped housing. We will have to build as much housing as possible on the mine's territory. Our press must write more about the miners' labor deeds. Georgia's writers and cultural figures also owe something to our mineworkers.

Communist mineworkers frequently reproach Gruzugol's officials for formalism--writing numerous orders and directives to rectify the situation and arranging check-ups that are not all that essential. In the last two years Gruzugol' has sent down ...about 2000 orders and directives, and we have kept hundreds of mine specialists busy responding to them, but no practical results have come of it. This would not be so if the party committee and Gruzugol's officials had closer contacts and better mutual understanding; this would make socialist competition more effective and help matters along.

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FUELS

NEW OFFSHORE DRILLING PLATFORM PLANT UNDER CONSTRUCTION IN KARADAG

Baku VYSHKA in Russian 2 Oct 81 pp 1-2

[Article by A. Gamedov and I. Babayan: "Model Construction Project Begins"]

[Text] The sea presents a pale, monotonous vista in the rain. The wet, slick ground also has a duller appearance than usual. The swiftly advancing autumn is adorning nature in its own colors. But it is unable to repaint a blue structure with a reddish steel openwork frame visible off in the distance.

It is the main building of a new and unusual plant under construction in Karadag, on the shore of the Caspian. It is the first enterprise of its type in Azerbaijan and the nation as a whole. Suffice it to say that its production facilities are being erected both on land and on the water. It will fabricate offshore drilling platforms, for drilling wells at water depths up to 200 meters. Nobody in this country has yet penetrated such deep water to gain access to oil and gas under the seabed, for we have lacked the reliable equipment needed for such operations.

The attention of two all-union ministries -- Minmontazhspetsstroy [Ministry of Installation and Special Construction Work] and Minpromstroy [Ministry of Industrial Construction] -- are focused on this construction project. The plant is being built, with simultaneous construction of housing in Primorsk for the plant's workers, by three general contractors -- the republic Minpromstroy, the Aztransstroy Trust, and Glavbakstroy -- which have allocated considerable manpower and resources to the project. The republic Minpromstroy has set up a special Trust No 7 directly at the construction site, and has established SUM-7, which is doing the earth-moving work, as a component of Promstroymekhanizatsiya. The Aztransstroy Trust has relocated its Floating Construction and Erection Detachment No 37 closer to that site where a large water area is being enclosed by moles. A plant harbor is being constructed here, with large docks and dredged dock approaches for special barges adapted for hauling the heavy rigs to the drilling sites.

We are encountering for the first time in this republic such a new form of project organization where large general contractor subdivisions are established in the area of a major industrial plant under construction and for the purpose of building that plant. This is in conformity with the instructions of the 26th CPSU Congress, calling for development of a network of mobile construction organizations and mobile supply and equipment depots.

Construction of this 335 million ruble plant began in 1979. It was envisaged by the CPSU Central Committee decree entitled "On the Results of Examination of Proposals by the Central Committee of the Azerbaijan Communist Party on Development of Various Branches of the Republic's Industry in 1976-1980," and specified in the Principal Directions of Development of this country, adopted at the 26th CPSU Congress.

The heavy equipment operators of the Promstroymekhanizatsiya Trust were the first to arrive at this site on the shore of the Caspian, dozens of kilometers from Baku. They transformed the coastal desert, preparing the site for construction. In the last several years they moved more than 4 million cubic meters of dirt and laid 8 kilometers of rail line, along which equipment, structural members and supplies are now being hauled. Construction is being completed on a water line from Dzheyran-Batan to the plant site. The equipment operator and erection crews have pledged to complete the line in October.

"We are feeling more optimistic every day," states R. Kerimli, manager of Trust No 7. "Construction of our own base facility is nearing completion. This has not been an easy task. We have constructed three special camps for the construction workers, with 500 persons residing in each. Dining halls accommodating 1,000 persons are operating at three locations. A potable water line has been constructed. We have turned over to the client a mechanized supply depot with rail spur, soon we shall complete a covered storage facility for imported equipment, etc. But the most important thing, which pleases our work force, is the fact that the footings and foundation work have been completed on schedule, so that the erectors can begin putting up the frame of the main building...."

Yes, it is a critical moment. According to instructions issued by USSR Minmontazhspetsstroy, construction crews of the Volgodonsk Administration of the Rostov Yuzhstal'konstruktsiya Trust, which were building the famed Atommash Plant, were to be transferred to Baku. Receiving the new assignment, the construction crews pledged to speed up all operations and come to the assistance of the Azerbaijan construction workers.

This piece of news perplexed the management of Trust No 7. Obviously this noble gesture on the part of the Rostov construction workers should receive an equally lofty response, that is, ready things ahead of schedule for them to go to work. This essentially signaled the beginning of competition between the two work forces, Rostov and Baku, although there was no formal agreement spelled out. The Baku people set up work operations in two full shifts. All cement and metal were delivered to section chief U. Mamedov, who supervised foundation construction. Things got moving faster when the construction workers received the metal formwork. In short, they succeeded in accomplishing their task.

Their diligence was praised by V. Pilipishin, Volgodonsk Administration deputy chief, who is in charge of erecting the main building steel frame: "The foundation work was performed precisely according to the plan and with good quality. Nothing other than high winds kept us from commencing work and progressing rapidly."

"Atommash was erected in record time. Are you employing any advanced methods or techniques in organization of construction which you used on Atommash?" we asked him.

"Everything we learned there is useful to us on this job. Incidentally, before Atommash, we erected the buildings at the Kama Truck Plant. We brought along our heavy cranes, which are capable of lifting multi-ton loads to the required height. Proceeding from the position that it is easier for an erector to work on the ground than up in the air, we make the structures as large as possible. This saves time, speeds up the erection process, and ensures maximum safety. We install posts, for example, in a recumbent state to full height, we erect full modular stacks, and we first assemble panels on a bed. At first they did not permit us to assemble in large modules. We appealed to the minister, Comrade Safaraliyev. He supported our request and ordered that ties and rails be supplied for laying track, along which we move structures and modular units to the erection site."

Recently two new erection crews -- those of A. Matveyev and V. Byvshev -- joined the previously arrived erection crews of A. Rafikov, R. Altynbayev, S. Kainbekov, and M. Zdutov's crew of welders. The crews of Rafikov and Altynbayev are installing sandwich-type blue panels: they are exterior-faced with colored plastic. A large panel of 200 square meters is assembled of individual small panels on an assembly bed. A crane picks it up and raises it into position. All the erectors have to do is to fit the panels to the metal frame so that the fastener locations line up, and then they tighten the nuts. The walls of the main building are going up quickly, easily, and safely! The ease and swiftness are achieved by the designers' progressive idea of an industrial method of construction and the more efficient erection process developed by the workers. The pace of construction has been sped up by 33-50 percent. The erection crews of the Rostov Yuzhstal'konstruktsiya Trust have already achieved their year's target.

"By the end of December we intend to erect an additional 1,500 tons of metal structures," stated V. Pilipishin. "The general contractor is pushing things along, putting in the foundation work for the decking assembly shop for the future drilling platforms. They are giving us plenty of breathing room...."

The harbor construction crews have also accomplished a great deal, as A. Tsapkin, chief engineer of the Aztransstroy Trust, related to us. The two enclosure jetties are already in place. They are presently being raised another meter in connection with change in Caspian hydrologic conditions. A production base has been built for Floating Construction Detachment No 37, and revetment construction and bottom dredging have begun in the jetty-protected area. Preparations are in progress for constructing the docks. Plan targets are being met.

"This enormous plant has already taken on its full configuration," stated G. Sadraddinov, chief engineer of Trust No 7. "The perimeter fence is under construction.... The pumping station has already reached a height of several meters above grade, and nearby are the machine shop and a 60-hectare plant area which is to be spread with a thick, one-meter-deep layer of gravel.... It is true that no final decision has yet been made on where the gravel should be obtained...."

Perhaps at this point we can interrupt our external description of the new plant, although it is most fascinating, and address some unresolved problems. One of them involves gravel. Up to the present it has been hauled from Bagram-Tape. It is not suitable, however, due to its high dirt content and the large size of the gravel pieces. And although construction of the 60-hectare site was begun quite some time ago, the gravel spreading operation is lagging.

Not all details have been thoroughly thought out. We met a group of heavy equipment operators who had not arrived at the construction site until noon. They reside in Sumgait and Khyrdalan, while others live in Baku. They had not been picked up by the bus which, we were assured at Minpromstroy, had been assigned to provide them with transportation. Was that day perhaps an exception, and that this arriving at work several hours late would not be repeated?

"It will," excavator operator V. Benin stated angrily. "Sometimes we do not even make it to work because of lack of transportation. Then all our equipment -- 13 excavators, 6 bulldozers, and 15 trucks -- stands idle all day."

As they say, the further you go into the woods, the more firewood you find. We learned that fuel supply interruptions occur, and that there are no heated railcars, no place to dry out. And yet cold, penetrating winds blow along the seacoast....

There is also another problem. They organized SUM-7, but they failed to give it adequate heavy equipment. They need big S-100 bulldozers and excavators. The administration has no production base.

We could go on and on listing errors of omission. We might mention the cement shortage, for example. The Karadag Cement Plant is failing to supply the construction workers adequately: they are providing half the quantity of cement needed. This cement supplier, just as many other suppliers, should be tied to this leading Azerbaijan construction project via competition according to the principle of "Worker Relay," so that it responds to the interests and needs of the contractors and finds the internal reserve capacity to increase deliveries.

When the subject of "Worker Relay" was brought up, trust manager R. Kerimli stated that it specified measures pertaining to organization of exemplary construction of the offshore drilling platform assembly plant.

USSR Gosstroy held a conference-seminar at the first of 11 model construction projects -- the Krasnoyarsk Heavy Excavator Plant, attended by representatives of the general contractors building the offshore drilling platform plant. On their return, they proceeded to elaborate measures through joint efforts to transform their construction projects into exemplary projects. But things are not progressing well, and the "Worker Relay" is most appropriate! Why wait for instructions from above and waste time?

It is necessary more vigorously to utilize the experience and know-how of the construction workers who built the Baku Home Air Conditioner Plant and the ELOU AVT installation at the NB [expansion unknown] Oil Refinery imeni Vladimir Il'ich. We feel that this has not yet been adequately reflected in already drafted measures to transform the construction project into a model-exemplary project.

Exemplary, leading performance does not begin on empty ground. The higher the level of organization of the construction process, the faster it is achieved. The more effective socialist competition is, the higher the degree of mechanization of labor will be.

According to plan, the 11 exemplary construction projects should become a school of advanced labor methods, top-level output, and excellent quality for the entire country's contractor work forces. Our construction workers have been given a great honor and great responsibility. And they must honorably justify this responsibility!

3024
CSO: 1822/30

TRADE SERVICES TO BE IMPROVED FOR OIL AND GAS WORKERS

Ashkhabad TURKMENSKAYA ISKRA in Russian 26 Sep 81 p 2

[Article: "Better Services for Oil and Gas Field Workers"]

[Text] We know how necessary and at the same time how difficult is the job of oil gas producers, especially in the conditions of our republic. The party and government devote considerable attention to providing normal working and living conditions for oil and gas field workers. An important aspect of this is providing them with goods and services.

The trade, public food services and personal services division of the TuSSR People's Control Committee, jointly with the people's control committees of Nebit-Dag and Cheleken, analyzed the performance of the URS [Workers' Supply Administration] of the Turkmenneft' Association and the ORS [Workers' Supply Department] of the Turkmengazprom All-Union Production Association. Alongside certain positive changes, serious deficiencies were also revealed in the performance of these supply organizations. With an overall retail goods turnover plan fulfillment in the first half of this year by the URS of Turkmenneft', almost one third of the administration's trade enterprises failed to meet their plan target. Undersupply of goods to the public totaled 1 million 220 thousand rubles. More than one fourth of the dining facilities of the public food service office and the Darvaza ORS of this administration also failed to meet their plan target, with a shortfall of 270,000 rubles.

The situation with the Cheleken ORS is no better: 14 out of 40 stores failed to meet their goods turnover target, with a goods sales shortfall of 110,300 rubles.

The main reason for nonfulfillment of the retail goods turnover plan is poor organization of trade. Frequently there are interruptions in the supply and sale of goods which are available in sufficient quantity at supply depots and warehouses. Trade organization officials and store managers show an irresponsible attitude toward prompt acquisition of a full assortment of such goods. State funds for goods are not fully utilized. It frequently occurs that stores are closed for extended periods of time for repairs or for taking inventory.

The problem of ensuring uninterrupted supply of bread and flour products to the workers of Nebit-Dag and Cheleken has persisted for quite some time. As a rule bread of only one type is sold in the stores of Nebit-Dag and Cheleken. Things are no better as regards supply of potatoes, fruits and vegetables. At the time an on-the-spot check was made, many stores of the Nebit-Dag grocery URS and the Kamyshldzhinskiy ORS were out of milk and sour-milk products, some hulled grain products, peas and beans, granulated sugar, canned fruit and vegetables, fresh-frozen fish, top-grade flour, and sausage. At the same time funds for purchase of these items are not being adequately utilized.

Of 38 stores of the Nebit-Dag manufactured goods ORS checked, 21 did not offer the full variety -- by sizes and colors -- of the sewn garments and knitwear items available at the warehouse: men's and children's shorts, handkerchiefs, towels, cotton cloth and pillowcases, quilt covers, and sheets. Also missing from the counters were a great many household articles also available at the wholesale warehouses. Stores in the communities of Aladzh and Neftebaza, which are administered by the Cheleken ORS, for a period of 6 months had carried no haberdashery goods or children's articles, although available in abundance at the warehouse.

The officials at the Turkmenneft' Association URS and the Cheleken ORS of the Turkmengazprom Association are ignoring violation of Soviet trade regulations: short-weighting and overcharging customers, and hiding away short-supply goods. According to the figures of the Nebit-Dag State Trade Inspectorate of the TuSSR Ministry of Trade, in 1980 such facts were revealed at one out of every six inspected enterprises of the Turkmenneft' URS.

In the course of the inspection, volunteer inspectors dropped in on 99 retail trade locations and public food service enterprises administered by the Turkmenneft' URS and Turkmengazprom ORS. Various violations of Soviet trade regulations were discovered at every one of them. At Store No 20 in the community of Kotur-Tepe, for example, the meat department clerk overcharged a customer 58 kopecks, while sales clerk Nepesov in Store No 8 in Nebit-Dag overcharged a customer by more than 1 ruble 50 kopecks. Sales clerk Khudayberdyyev shortchanged customers at Store No 5 of the Nebit-dag grocery URS, and sales clerk Berdyyev did likewise at Store No 22 of the manufactured goods ORS; there were many other such cases.

Cases of hiding away short-supply goods, and selling them under the counter were quite widespread at the URS and ORS trade enterprises. At Store No 3 of the Cheleken ORS, for example, inspectors discovered hidden away in a storeroom 14 pairs of ladies' shoes valued at 658 rubles, and 5 pairs of imported trousers valued at 350 rubles; inspectors discovered at Store No 26 42 sets of children's garments valued at 948 rubles, at Store No 22 of the Nebit-Dag manufactured goods ORS -- a lady's leather coat valued at 650 rubles, and at Store No 1 -- imported men's and women's summer shoes and Finnish-made men's boots valued at 470 rubles. Cases of selling short-supply goods under the counter were established at stores No 3 and 28 of the Cheleken ORS.

Within the Turkmenneft' URS system, as of 1 July 1981 the total shortage from loss and theft amounted to 344,000 rubles. This figure includes 161,000 rubles worth of damaged goods, while the figure was 58,500 rubles for the Cheleken ORS.

For deficiencies in trade services to oil and gas industry workers and for failure to safeguard socialist property, the Turkmen SSR People's Control Committee issued a severe reprimand against A. F. Shanin, chief of the Turkmenneft' Association URS. For lack of adequate supervision on the part of the Turkmengazprom All-Union

Production Association URS over the activities of the Cheleken ORS under its supervision and for loss and damage to goods, N. K. Korvenov, chief of the Turkmengazprom All-Union Production Association URS, was issued a cautionary reprimand.

The TuSSR People's Control Committee instructed the above listed officials to take immediate measures to correct existing deficiencies. The committee pledged to verify compliance with these instructions.

3024
CSO: 1822/30

FUELS

STEPANAKERT-NAKHICHEVAN' GAS PIPELINE CONSTRUCTION

Baku VYSHKA in Russian 29 Sep 81 p 2

[Article by O. Nechipurenko and R. Verdiyan: "Highest Point"]

[Text] The first rays of the autumn sun were not yet spreading their red glow on the forested slopes of the foothills of the Lesser Caucasus when the sound of the turbines of an approaching helicopter reached the dormitory cars in the field camp housing the construction workers of Construction Administration No 1 of Aztruboprovodstroy.

"Today we are laying pipe at an elevation of 1,950 meters, the highest point along the world's most difficult pipeline route," stated the section chief, engineer Vitaliy Shukyurov. Incidentally, he had built other major-project pipelines, including the Kura. "We have already completed 7 kilometers of 50 centimeter diameter line of the entire 32-kilometer line."

Now an operation had begun which reminded us of stunts performed in the movie "Daredevils." With the difference that this was a normal day's work both for the pilots and the pipeline construction workers. Hovering a meter and a half above an area lined with concrete slabs, on which are stockpiled pipe sections more than 11 meters in length and weighing more than a ton, the helicopter picks up with an exterior sling one of the pipe sections, which has been bent on a special machine. Lying on the deck of the helicopter cabin, crew chief A. Sokolov watches through the open doorway as load rigger Ramiz Dzhafarov secures the hooks to the ends of the pipe section. He reports completion of this operation by interphone headset to the pilot. The steel bird soars skyward, carrying away the huge metal pipe like a matchstick.

...In spite of the fantastic beauty of the mountains, at first one cannot get rid of a somewhat unpleasant sensation. The gas pipeline route plunges down steep slopes and surges up vertical cliffs. Following the zigzags of the right-of-way, the helicopter executes sharp turns on all three axes. In addition the pipe, visible through an aperture in the cabin floor, rocks from side to side, pulling the helicopter with it.

One's confidence returns only with a glance at the pilot, P. Dumchenkov, whose massive figure in the pilot's seat appears quite calm and relaxed: everything appears to be going well. Dumchenkov, a pilot with the Zabrat Aviation Enterprise, has been flying gas pipelines for 13 years now. He worked on the famous Surgut-Urengoy line, and he worked in Nizhne-Vartovsk. Suddenly a forest-covered mountain pops up right in front of us; it looks like we are going to fly right into it. But the altimeter needle proceeded to climb -- and there before us was our destination!

We now followed the initial procedure in reverse. As we hovered above a cleared area, which from our height looked about the size of a saucer, a burst of wind whistled into the cabin. The crew chief had opened the door and was talking the pilot slowly down. Finally another load rigger, V. Galstyan, released the cable from the pipe section, which was now lying on the mountaintop, soon to join the future gas pipeline.

"Everything is ready for lining it up," reported Marina Kislitsina, work superintendent of the Ukhta Specialized Earth Moving Administration.

Although notions of a job superintendent as a man in a quilted jacket are a thing of the past, one nevertheless is a little surprised to learn that this frail lass is in charge of the highly complex job of cutting out a 12-meter right-of-way on slopes of more than 60 degrees, blasting and ripping rocky soil rated at 8 or 9 on the difficulty scale.

"Of course it is not an easy job," she agreed. "But our people are outstanding. I should particularly like to mention bulldozer brigade leader Mirza Mursaliyev. Sometimes his bulldozer moves downslope, held from overturning only by the blade or ripper attachment. You asked him how he does it, and he merely smiles. There are others as well: excavator operator Kazimir Anikhimovskiy and bulldozer driver Guseyn Iskenderov always work enthusiastically. Very helpful is the fact that our section was the first in the administration successfully to adopt the brigade contract method."

The pipe gang, directed by veteran heavy equipment operators Vladimir Ponomarev and Boris Petrov, carefully place the helicopter-delivered pipe section onto firm rock pedestals, which were put together by construction workers under the direction of brigade leader Kyazim Gurbanov. Now comes the most critical moment: welding the pipe. During pipeline operation, each square centimeter of weld, applied in several beads, must withstand a gas pressure of 50-60 kilograms.

Radiographic inspector Aleksander Smirnov, inspecting the weld with special equipment, nods satisfaction: the quality of the welding is excellent.

The construction workers laying the parallel line on the high-mountain section of the Stepanakert-Nakhichevan' gas pipeline are performing shock-work labor these days.

"When we initiated competition for successful fulfillment and overfulfillment of the targets of the 11th Five-Year Plan," stated spreadman Bakhtiyar Babayev, "we resolved to complete the line by the 60th anniversary of establishment of the USSR. And we are fully resolved to keep our word."

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FUELS

NEFTEZAVODSK CONSTRUCTION REPORT

Ashkhabad TURKMENSKAYA ISKRA in Russian 30 Sep 81 p 2

[Article by TURKMENSKAYA ISKRA special correspondent N. Sosnina, Neftezavodsk: "Tight Knot of Problems"]

[Text] The Neftezavodsk construction workers do not yet have anything to brag about. Nor has there been in past years of dragged-out work and chronic failure to meet plan targets. But now that special organizations have been set up for construction of oil refinery facilities and, most important, project financing has been significantly improved, foul-ups in supply and in the performance of subcontractors seem particularly vexing and intolerable. These troublesome factors, which unfortunately have become habitual, once again have resulted in the target for the first eight months of the year to be met by only slightly more than 60 percent.

"You see," stated section chief S. V. Khodchenko, "we have manpower, and plenty of it, but sometimes our people simply cannot get the job done -- there are many hindrances and obstacles. Take Boris Ten, for example. He is in his third year at Neftezavodsk. He is well known in the oblast as a winner in socialist competition among the Chardzhou construction workers, competition organized according to the 'worker relay' principle. In June Ten's brigade won the Challenge Pennant of the oblast trade union council and the newspaper CHARDZHOUSKAYA PRAVDA for completing the job and making things ready for the installation crews 10 days ahead of schedule. But the subcontractors from the Neftezavodmontazh Construction Administration were in no hurry to make use of this opportunity. It is true that they have started work, but they are short of people, and the job is not getting done. One might ask what is the sense of such a 'relay'? It would be a good thing if the oblast trade union council looked into the matter."

The mood of the workers of the leading brigade of the Turkmenvostokneftestroy Trust is also being darkened by other things. Instead of performing their specific jobs, skilled workers are spending all day correcting the shoddy work of others. The Ashkhabad Experimental Machinery Repair Plant of the Turkmenstroyindustriya Trust shipped to this important petrochemical industry construction project towers which are taller than called for by specifications. For more than a month now Ten's crew has been cutting down and redoing the structures.

"It's a crummy job, and they don't supply us with much oxygen, although the cutting torch requires considerable oxygen. We must build our own nitrogen-oxygen station as quickly as possible. Incidentally, the plans specify such a station," the brigade leader reasonably argues. "But construction is proceeding slowly and poorly. When we finish the towers, we will need an uninterrupted supply of cement, sand, and brick. Here too, however, we are experiencing endless supply interruptions, because of which we are unable to introduce a labor participation factor and cost accountability. My brigade sees no improvement in the future. And Sergey Vasil'yevich is right about the relay. It is nice to receive valuable prizes: the brigade has twice received an award -- a radio and a rug. But the point is not prizes. We cannot see the end result of our accelerated work pace."

Boris Ten returned to his brigade, and I involuntarily recalled the bitter words of general contractor trust manager I. A. Aganov: "Things are moving forward in fits and jerks at Neftezavodsk. Statements about how important this project is are not backed up by anything." There is a considerable amount of truth in these words. It is true that the problem of personnel and housing for the trust is being resolved thanks to assistance by party officials. The general contractor cannot complain, as he could six months ago, about a shortage of manpower. Still, however, no base has been established for smooth, continuous work by the construction crews at the oil refinery.

And one of the major hindrances is the problem of supply. It took the trust six months to convince the TuSSR Ministry of Construction that the project needed not 3,000 but 5,000 tons of cement. They convinced them, but received no cement. In the summer the work force stood idle for 30 days due to a lack of cement. It is the same story with lumber. A total of 625 cubic meters was ordered for the third quarter, but nothing was delivered. The trust orders rolled stock and pipe fully in conformity with the plan, but supply requests are met only 50 percent.

Can plan fulfillment be achieved in these conditions? Everybody understands that it is impossible. But only the trust is made to be answerable for failure to meet targets. Incidentally, poor trust performance in 1982 is already "being planned." A total of 4,554 tons of metal will be required next year, when the ELOU-AVT unit is being erected and framed. The ministry's Turkmenstroykomplekt has agreed to deliver... 924 tons. A total of 6,259 tons of pipe will be required, with 1,160 tons promised. It goes on and on.

"Alright," I. A. Aganov said heatedly, "let us assume that the republic ministry cannot obtain resources from anywhere. In that case resolution of these problems should be sought at USSR Minstroy [Ministry of Construction], for it was an order issued by three all-union ministries -- the Ministry of Installation and Special Construction Work, the Ministry of Construction, and the Ministry of Petroleum Refining and Petrochemical Industry -- which ratified measures to speed up construction on our plant. Why have we forgotten about it? In particular, about specific shipments of materials for Neftezavodsk?"

In addition to poor supply, there are also other factors which threaten on-schedule spending of allocated capital. A poor job is being done by subcontractors, both internal and external.

We should note that of the entire estimated cost of the project -- 46 million rubles -- the trust is to expend only 7.2 million with its own resources and manpower. The remainder is up to the work forces of TuSSR Ministry of Construction, USSR Minmontazhspetsstroy [Ministry of Installation and Special Construction Work], the Sredaztransstroy and Turkmenenergostroy trusts. Precise coordination of the operations of subcontractors and organization of a genuinely effective "Worker Relay" at the level not only of brigades and sections but also trusts, enterprises and ministries are therefore very important.

Aganov has been unable to achieve this, however. One of the reasons for this is the obvious weakness of trust management at the construction site: they are short of experienced engineers of initiative, who could assume part of the burden of problems. The fact that the ministry is ignoring the project is also a factor.

V. K. Zagorodskiy, chief of the Neftezavodmontazh Construction Administration, acknowledges: "We have few skilled welders and riggers. The Neftezavodmontazh Trust is a big organization. It is involved in projects throughout the Soviet Union and abroad as well, but it is not paying adequate attention to its subdivision at Neftezavodsk. This also applies as a whole to Minmontazhspetsstroy, the work forces of which have accomplished work totaling only 741,000 rubles instead of the targeted 1 million 434 thousand. That is one of the problems."

Secondly, Turkmenenergostroy was contracted to build a thermal electric power plant in Neftezavodsk, without which the future plant cannot operate. But the Chardzhou-TETsstroy Construction Administration, organization of which dragged on too long, in a period of 8 months has accomplished only one fifth of its plan target.

This is a matter of great concern to A. K. Astashov, director of the enterprise under construction. Aleksandr Konstantinovich draws attention to the following figures. The heat and electric power plant is scheduled to come on-line in the first half of 1984, which will require accomplishment of 34.4 million rubles worth of construction work. At the present pace of construction, this timetable is unrealistic. Trust manager K. L. Bulavko and construction administration chief V. A. Dubinin, instead of organizing efficient work at the oil refinery site, are engaging in meaningless arguments with management on the most insignificant grounds.

The work force of Construction Train No 394 of Sredaztransstroy has not made up for last year's performance lag. Management is concerned by the state of affairs regarding installation of signaling, communications and interlocking equipment at the Ispaz yard, for which expensive equipment was purchased. The section headed by V. Kan has no installation timetable schedule, and yet light signals still remain to be installed, as well as construction of 13 rail spurs.

In short, a critical knot of problems has developed at the construction project at Neftezavodsk. These problems should be vigorously addressed and corrected. Neither pleas, nor high-level deliberations, nor memoranda will help if they are not followed by precise and immediate execution of orders and instructions. This is the very essence of the "Worker Relay." Unfortunately, the organizations involved in this construction project are forgetting this fact, although the results of poor execution discipline are clearly in evidence.

In this connection we should like to mention Construction Administration-2 of Turkmenspetsstroy of the republic Ministry of Construction. Throughout 1980 and

1981 instructions to administration chief D. Achilov and promises by the latter to begin work "this week" have been wandering from the minutes of one general contractor planning session and conference to another. They have agreed and promised to the point where a real threat has arisen: the plant will be constructed, but without in-plant service lines.

...Work continues at Neftezavodsk. S. V. Khodchenko is busy and B. Ten has his hands full. Construction is progressing thanks to the great efforts of the people involved. The main task is to help them.

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FUELS

FERGANA OIL REFINERY FAILS GAS CONDENSATE OUTPUT

Tashkent PRAVDA VOSTOKA in Russian 20 Sep 81 p 3

[Article by I. Alyab'yeva: "At Whom Should the Customer Be Angry?"]

[Text] Several years ago there appeared reports about a new motor fuel -- gas condensate. At first these reports were thought to be exaggerated, but they subsequently proved to be true. Seven truck fleets in Bukhara and Tashkent -- a total of 553 Ikarus, MAZ and KamAZ trucks -- operated on the new fuel, and the drivers, judging from their response, are very pleased. According to experts, the new fuel is 40-60 percent cheaper than conventional motor fuel, extends engine life, and substantially reduces exhaust pollutants.

The significance of this new innovation will become particularly obvious if we cite a few lines from the Principal Directions: "Increase production of gas condensate and ensure its fuller utilization." It truly constitutes a valuable diesel fuel reserve. An analysis of condensates has shown that they can be successfully employed as a fuel following simplified processing right in the oilfield. This means obtaining additional tens of thousands of tons of high-grade, inexpensive fuels.

"Improve industrial processes and transport vehicles with the aim of reducing air pollution and improving the removal of harmful pollutants from exhaust gases." Converting the diesel fleet just in Tashkent will make it possible to reduce soot emissions by 1,382 tons, carbon monoxide -- by 4,320 tons, hydrocarbons by 864, oxides of nitrogen by 1,152, and carcinogenic hydrocarbons by 13 tons per year!

In addition, today the problem of comprehensive utilization of natural resources is a very critical one, for it was not long ago....

"What is that burning?" the thrifty individual will inquire at the sight of flames rising skyward above gas fields.

"They are flaring off condensate," comes the reassuring reply.

Flaring off gas condensate was considered routine, because it was considered a useless product accompanying natural gas. Who needed it?

It has proven quite useful! It has been calculated that the savings to be obtained by converting the nation's automotive fleet to diesel fuel by utilizing additional gas condensate resources will amount to approximately 6 million rubles at the initial stage of adoption, and billions when total conversion to diesel is achieved. And the wasteful gas-field flares of the past will be extinguished, as this "white oil" is properly utilized.

This development was initiatied by the Tashkent Motor Transport Institute, its rector, Doctor of Technical Sciences A. A. Mutalibov, and Candidate of Technical Sciences E. V. P'yadichev. Several supporters joined ranks behind them -- a group of people with initiative, who in a short period of time made a thorough study of this unique liquid hydrocarbon and determined the future prospects for its practical utilization. It was proven that it is economically expedient to produce gas-condensate fuel -- and there is plenty of raw material for it in this republic -- directly in the oil and gas fields. For example, conversion of diesel-powered vehicles to run on gas condensate just in the Karshiirstroy Association (Mubarek), with the present diesel fleet, will generate net savings of approximately 5 million rubles. To achieve this, an installation for processing this fuel must be constructed in Kasan.

Following numerous bench, road, operational and other tests on diesel engines at the Tashkent Motor Transport Institute, fundamentally new diesel wide-fraction gas-condensate fuels were developed. Their advantages have been demonstrated experimentally and practically.

Many national and republic government establishments showed considerable interest in the work of the Tashkent people. It was examined at the State Committee for Science and Technology, USSR Gosplan, and the Interministerial Scientific and Technical Council on Combined Problems of the Environment and Efficient Utilization of Natural Resources. Their decisions were unequivocal: republic planning agencies should devote serious attention to this work and promote its adoption. It was suggested that there be conducted large-scale experimental operation of diesel-powered vehicles burning the new fuel. For these tests the Fergana Oil Refinery was to supply Tashkent and Bukhara initially with test batches and later with regular commercial batches of the fuel.

The experiment has not been completed, since the plant is not supplying the fuel. The customer -- the Uzavtotranstekhnika Scientific-Production Association of the UzSSR Ministry of Motor Transport -- is angry and is refusing to pay for those stages of the project which have been completed.

On two occasions duly empowered republic agencies instructed the Fergana Oil Refinery to put into operation a commercial-scale installation in the first quarter of this year. We are almost in the fourth quarter, and yet things have not progressed....

"Perhaps getting things into production is a highly complex business?"

"Not at all," the experts reply. "All you need are three or four good welders and a full day, for erection and installation of the unit are completed. All that remains is to hook it up...."

It is essential to complete the job: such a large amount of work has been accomplished in research and adoption, and so many serious decisions have been reached -- and yet the project has stalled because of a single work force, which for some reason is disinclined to make its own contribution.

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FUELS

POOR PIPELINE WELDING PRACTICE LEADS TO COURT TRIAL

Moscow SOTSIALISTICHESKAYA INDUSTRIYA in Russian 10 Sep 81 p 2

[Article by SOTSIALISTICHESKAYA INDUSTRIYA correspondent Yu. Belanov, Tyumen': "Crack"]

[Text] A short, stocky fellow of pleasant mien entered the jail superintendent's office and sat down next to me. He had already been given a "skinhead" haircut by the prison barber. As he sat next to me on the edge of his chair, I thought to myself: "Good man, he has kept his spirits up. That is the most important thing for him right now." I put down the file marked Case No 71103, dealing with the indictment of G. A. Simonov, a criminal case initiated on 15 August 1980 and brought to a conclusion quite recently.

"Comrade G. A. Simonov has been employed at Construction Administration-74 of the Nefteprovodmontazh Trust since July 1975. He is honest, modest, enjoys the respect of his fellow workers, and is a good friend. He has been awarded administration and trust certificates of merit on numerous occasions" -- one reads in his personnel file. And it is the absolute truth.

"By his actions, constituting a violation of construction standards and regulations, resulting in financial loss to the state, Gennadiy Aleksandrovich Simonov committed a crime as specified by Article 215 of the RSFSR Criminal Code, and is hereby sentenced to four years of compulsory labor on construction jobs of the national economy." This verdict was recently rendered and sentence passed by the Yarkovskiy People's Court in Tyumenskaya Oblast. Everything in this harsh decision by the court is also entirely just.

How did it happen that this young worker, at the very outset of his career, ended up in the prisoner's dock?

...In accepting the completed 53-kilometer section of the second, parallel string of the Urengoy-Chelyabinsk natural gas pipeline, of course none of the members of the State Acceptance Commission suspected that with their signature on the acceptance document they were sanctioning a catastrophe which was lying hidden underground.

Only much later would it be determined that a welder, performing repairs (cap bead) on an 80 mm weld, had grossly violated regulations. Regulations require that every layer of a weld seam performed by arc welding must be cleaned of slag before apply-

applying the next bead. This had not been done. As a result, slag inclusions were formed on the inner wall of the pipe, which would soon be subjected to enormous gas pressure. These slag inclusions were very tiny, smaller than the eye of a needle, but quite sufficient for "...a crack to form in the zone of thermal influence of the rewelded seam, in a butt weld." This is what led to the pipe failure.

The trial determined who was to blame: flaw detector operator G. Simonov of Construction Administration-74 of the Ufa Nefteprovodmontazh Trust, who had checked the quality of the welded joint between pipes of different wall thickness not by gamma ray or X-ray, as regulations require, but magnetographically, which in these cases does not provide reliable information.

Let us assume that the court's verdict was correct. But a question will arise even with a reader who is not entirely familiar with the case: why was a person punished whose job involves only inspecting welds? Why were those who performed the welding not punished?

This is no idle question, for the matter in question is people's fate, let alone the fact that the pipeline failure cost the state almost 90,000 rubles. And since this accident is unfortunately not an isolated incident, it is absolutely essential to examine in detail the existing system of inspecting welds on oil and gas trunk lines under construction. Does the present system ensure a high degree of line reliability?

I shall begin at that moment when, having made a poor weld, the welder attempted to correct it by applying an additional repair weld. As we already know, he did not do a very good job.

Who is this welder?

Let us take the Welding Log. This is the only document in which all welding operations and the welders who performed them should be carefully recorded. Among the many columns, in which grade of steel and pipe manufacturer, temperature to which the butt joint was preheated, its route number, etc are noted, we find the column we are seeking: "Welder, last name, first name, patronymic, and stamp number." But this column does not contain a single name, only the abbreviated entry: K-2.

What does it mean?

"This is the number of the common, brigade stamp," explained Ye. Sukharev, brigade leader of the welders who worked on the pipeline section where the failure occurred. "There are 11 men in my brigade. I cannot state at the present time precisely who rewelded on the interior of this butt joint."

And that is not because the brigade leader is trying to conceal something. The welding operations procedure on natural gas pipelines is such that the brigade constitutes a single process flow, as it were, in which each man performs a great many quite diversified operations. The first four-man team, for example, puts on the basic weld, beginning from the bottom position. As soon as the weld is cleaned of slag, the following two-man teams apply filler beads, following each other in shuttle fashion. Inside welding is performed in precisely the same manner, operation by operation, and it is indeed impossible to determine who performed a specific operation after so much time has passed.

Under these conditions welding, the quality of which primarily determines the reliability of the future natural gas pipeline, should be very rigorously and constantly monitored and inspected in the course of pipeline construction. As it happens, however, the first and very important inspecting individual -- the brigade or welding gang leader, in this case Ye. Sukharev, according to regulations inspects the quality of inside welds selectively. Section superintendent V. Prilipko proceeds precisely in this manner: "We are set up in two shifts, and with a constant shortage of foremen, I cannot inspect more than a third of the inside welds."

We shall not be hasty in drawing final conclusions. For the time being we shall note only one thing, the most significant item: the first loophole for defective work is contained within the regulations themselves, which allow middle-level supervisors to perform not 100 percent but selective inspection of welds.

Further inspection responsibility is on the section chief. But he has overall responsibility for supervising work operations, ensuring uninterrupted delivery of pipe and other materials to the right-of-way, and providing the workers with adequate living conditions. In short, as V. Belousko, chief of the first section, stated at the inquiry: "I was able to visit the spread only once a week and also checked only sporadically entries in the Welding Log. There was no way I could check and inspect everything in detail."

Let us now see what was done to prevent substandard work by another important inspection agency -- the technical inspection service.

A. Ol'khovskiy, Surgut section technical inspection service engineer, stated: "Realizing that superintendent Prilipko is heavily work-loaded and was hard put to keep an eye on everything, I initially visited his section every day. When the work pace began picking up, I tried to inspect every couple of days, but later...."

Practices followed "later" were highly irregular. Regulations state that after welding operations are completed, a brigade may not proceed with coating, wrapping and lowering in until a technical inspection service engineer inspects the section and gives appropriate authorization. But this most important regulation was frequently ignored. When a technical inspection service engineer would arrive at a given point along the spread, frequently not only welding but coating and wrapping would be completed as well. That is, it would be no longer possible to make even an external inspection of the welds. In addition, Comrade Ol'khovskiy's section of inspection responsibility was almost three times as long as the standard length.

Thus for various reasons an obvious defect got past, just like through a sieve, a great many professionals and officials responsible for the reliability of the future natural gas trunk line: the welder himself, the brigade leader, the job superintendent, the section chief, and the technical inspection service engineer. And now the last, main inspecting agency -- the Field Testing Laboratory (PIL) -- stood in the path of this poor-quality work, which meant potential line failure.

This laboratory is an independent structural subdivision. But its work is performed entirely under the supervision of the pipeline construction section chief. Each morning he gives a specific job assignment to the PIL flaw detection personnel: what volume of inspection work is to be performed and where.

A brief excerpt from the hearing proceedings graphically indicates how and why the defective weld also got by this final inspecting agency: "Investigator to G. Simonov: This is Conclusion No 67, dated 13 March 1979. Did you sign this document?

"G. Simonov: That is my signature.

"Investigator: But the boundary between category 2 and 3 pipeline sections is located here, where pipes with differing wall thickness are joined. A weld joining pipe of differing wall thickness must be X-ray or gamma-ray inspected. What method of weld inspection did you employ on this section of the pipeline?"

We already know the answer: magnetographic inspection was employed. But the flaw detection operator did this not out of negligence but out of necessity. A great many welds are done each shift. And an inspection report must be made quickly on each. The inspections and reports are made hastily.

The defect which caused temporary shutdown of one of the sections of the Urengoy-Chelyabinsk natural gas pipeline has been corrected. But there is no guarantee that a similar failure will not occur, because there is a serious flaw in the existing system of operation-by-operation monitoring and inspection of quality of welds in the subdivisions of the Nefteprovodmontazh Trust (manager A. Maksimov). And this applies not only to the Ufa Trust. The Tyumenskaya Oblast procurator's office is conducting an investigation of similar violations of construction standards and regulations in other subdivisions -- the Lengazspetsstroy and the Urengoytruboprovodstroy trusts.

We believe that the problem, brought to light by our criminal justice agencies, is so serious and important that it merits a thorough examination by the Ministry of Petroleum Industry, Ministry of Gas Industry, Ministry of Construction of Petroleum and Gas Industry Enterprises, and other agencies which are involved in pipeline construction. We cannot permit the flaw which has formed in the patently inadequate organization of labor of the inspection services to lead to the catastrophic failure of the entire quality control system in oil and gas pipeline construction.

There is also another aspect to the problem. A flaw on a pipeline seriously affects people's lives. A sad and instructive example of this is the fate of flaw detector operator Gennadiy Simonov, for the management of the Ufa Nefteprovodmontazh Trust must share the blame for what happened to him. Unfortunately, such culpability is not provable in court....

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KAZAKH GASIFICATION MAKES STRIDES

[Editorial Report] Alma-Ata SOTSIALISTIK QAZAQSTAN in Kazakh 6 September 1981 carries on page 3 a 1,100-word article by Q. Rakhymghaliev, vice head of the chief administration for the gas industry under the KaSSR Council of Ministers, published on the occasion of All-Union Petroleum and Gas Industry Workers Day of the gas industry in Kazakhstan. The article notes that the first liquid gas was installed in Alma-Ata only some 20 years ago and yet gas has brought about tremendous changes and assumed much importance in republic life.

During the last 5 years alone, Rakhymghaliev continues, 654 kilometers of gas lines were installed in the republic, and 142,000 square meters of housing were gasified. A large industry has, in fact, come into existence with considerable money invested in it, an industry that continues to grow. Today 8,500 factories and 2,980,000 residences are gasified. The latter figure corresponds to 84 percent of residences (87.8 percent in rural areas). Kazakhstan, Rakhymghaliev points out, is one of the most gasified areas in the world.

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MAJOR BROWN COAL DEPOSITS IN TURGAYSKAYA OBLAST

[Editorial Report] Alma-Ata SOTSIALISTIK QAZAQSTAN in Kazakh 5 September 1981 carries on page 2 a 200-word notice by Zh. Zhunisov on geological survey analysis of brown coal fields in the Orlov area. According to the Turgay Geological Prospecting Expedition, the deposits are largely near the surface and can be extracted by open-pit methods at a considerable savings in cost. The field extends 5-6 kilometers, and the coal has a high caloric value, making it suitable for mixing with other fuels. A large mining settlement is now being planned for the area, and the coal mined will be used to support two large electrical generating stations.

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CSO: 1832/1014

FUELS

BRIEFS

NEW COMPRESSOR STATIONS--The first units have come on-line at two more compressor stations -- No 14 and 15, the Danilovskaya and Gavrilov-Yamskaya. They were brought on-stream ahead of schedule by the Ministry of Construction of Petroleum and Gas Industry Enterprises work forces building the Urengoy-Gryazovets-Moscow natural gas pipeline. With startup of this equipment, the daily transport of "blue fuel" on this trunk line has approached 40 million cubic meters. "This is a very substantial increase over August," stated G. Chesnokov, chief of the ministry's central dispatching division, "5.5-6 million cubic meters per day on the average. Moscow families, utilities, industrial and power enterprises, however, have not yet seen any of it. The additional gas is being pumped into the Shchelkovo gas storage facility to build up stocks for the winter. This gas will be distributed during the winter, on the coldest days, when Moscow requires additional gas." The storage location is a large, equipped site called the Shchelkovo underground natural gas storage facility. Its storage capacity runs into nine figures. In order to inject gas into the deep-lying porous rock, the construction people of the Ministry of Construction of Petroleum and Gas Industry Enterprises built high-output compressor shops, drilled a great many deep wells, and installed an automated control system to manage this complex operation. It was costly, but worth it. Such underground storage reservoirs, while taking up little space, are capable of storing away hundreds of millions and sometimes billions of cubic meters of gas. They are much safer than surface facilities, save enormous quantities of metal, and do not take up land needed for agricultural production. The Shchelkovo underground natural gas storage facility, sited near Moscow, is only one of the units of an extensive network of similar facilities. Others have been constructed at Leningrad, Kiev, in the Baltic, Central Asia, on the Volga, in the Bashkir ASSR, in Armenia, and elsewhere. [By B. L'vov] [Text] [Moscow PRAVDA in Russian 30 Sep 81 p 2] 3024

BAKU OIL REFINERY--The new ELOU AVT unit built at the Baku Oil Refinery imeni 22d CSPU Congress has produced its first tons of gasoline. This large industrial complex will primary-refine several million tons of crude oil each year. The new facility was built under the program of radical renovation of Azerbaijan's oil refining industry. Its construction made it possible to eliminate several obsolete, low-output units at the Oil Refinery imeni Karayev. Control of all processes in the reactors of the new facility, which take place under high pressure and at high temperatures, has been automated and is run from a single operator control station. Employment of air-cooling equipment and utilizing as fuel gases produced in the process of refining the crude will greatly reduce water consumption and will generate significant fuel savings. The sophisticated oil refining process will make it possible to avoid polluting the air with waste products of the production process. The new unit is currently producing gasoline, kerosene, and diesel fuel. In the future it will be specialized in obtaining initial product for producing high-grade lubricants. A special vacuum tower and electric separator unit are designed for this purpose. The alkaline waste product produced in this process will in turn serve as raw material for producing short-supply naphthenic acids. The honor of working the startup shift was given to socialist competition leaders and top refinery specialists -- senior operator A. Mamedov and operator L. Ismikhanov. Directed by unit supervisor D. Dzhagangirov, they ensured precision performance by all automatic control equipment and the latest monitoring, measuring and testing devices. [Text] [Baku VYSHKA in Russian 29 Sep 81 p 1] 3024

SIBERIAN COMPRESSOR STATION--Siberian enterprises are receiving an additional flow of natural gas. The high-throughput Aleksandrovskaya gas compressor station near the town of Strezhevoy in Tomskaya Oblast has come on-line. Startup of this station has increased by one third the throughput capacity of the 1,400 kilometer Nizhnevartovsk-Tomsk-Kuzbass natural gas pipeline. [Text] [Moscow EKONOMICHESKAYA GAZETA in Russian No 39, Sep 81 p 3] 3024

NEW BASHKIR OILFIELD--A new oilfield has been discovered near the capital of the Bashkir ASSR. The Ufaneft' Administration has readied the field for production ahead of schedule and has produced the first tens of thousands of tons of "black gold." Drilling of exploration wells is also in progress. The 50th anniversary of oil production in Bashkiria will be celebrated in 1982. During these years the country has received 1 billion 50 million tons of "black gold" from this autonomous republic. [Text] [Moscow SOVETSKAYA ROSSIYA in Russian 3 Oct 81 p 1] 3024

TYUMEN' NATURAL GAS PRODUCTION--Tyumen', 24 Sep--The gas field production people of the Tyumen'gazprom Association have reached an important landmark. For the first time, they have produced 500 million cubic meters of natural gas in a 24-hour period. It has taken 15 years to reach this production level. During this time the Medvezh'ye field has reached full production, and six combined gas initial processing plants have come on-stream in the Urengoy field, which are processing almost half of the gas produced in this oblast. A high-throughput system of trunk gas pipelines has been built. The natural gas producer towns of Nadym and Novyy Urengoy have sprung up on the Arctic Circle. The billion cubic meter figure is to be achieved three times faster -- in less than five years. Further development of the huge Urengoy field will make this possible. Subsequently the Yamburgskoye field will come on-stream. [Text] [Moscow PRAVDA in Russian 25 Sep 81 p 1] 3024

UNDERGROUND GAS STORAGE--The work force of the Kalmaskoye underground natural gas storage facility (SPKhG) of the Aztransgaz Production Association completed, one and a half months prior to the end of the injection season, the year's state plan and met socialist pledges pertaining to storing natural gas. "By the end of the injection season," stated SPKhG chief M. Akhmedov, "our people intend to increase winter fuel stocks by additional tens of millions of cubic meters and fully to meet peak gas consumption loads this winter, when gas consumption increases sharply." The success was achieved primarily due to smooth coordination on the part of all SPKhG services and sections and observance of optimal operating conditions by gas transfer units, production and injection wells. An important role in achieving the excellent production figures was played by teamwork between scientists and production people and the adoption of recommendations by the people at the underground gas storage laboratory of VNIPIGaz, drawn up under the supervision of SPKhG designer Candidate of Technical Sciences F. Agayev. Implementation of the scientists' recommendations made it possible to expand the effective volume of the underground storage reservoir by 200-250 million cubic meters. Based on the results of comprehensive gas-hydrodynamic and geophysical investigations, the bottom-hole zone in 52 wells was treated with a surface-active agent, which made it possible to achieve in many wells a 10-15 percent increase in responsiveness. A labor example is being displayed by gas-driver compressor senior operator B. Suleymanov, operator R. Tagiyev, gas transfer unit maintenance mechanic R. Movlayev, gas production operator E. Bakhshaliyev, mechanic I. Gasanov, duty electrician N. Sergeyev, dispatcher A. Abdullayev, and others. [By R. Verdiyan] [Text] [Baku VYSHKA in Russian 1 Oct 81 p 1] 3024

BELORUSSIAN NATURAL GAS--Natural gas is assuming a leading position in Belorussian power and energy. It is fueling industry and households in all cities, towns and urban-type communities, as well as in approximately 20,000 villages in this republic. This has been achieved through the fruitful work accomplished by the gas people in the 10th Five-Year Plan. During that period gas consumption increased by more than one third. Hundreds of additional communities will receive gas following further development in the current five-year plan of the Torzhok-Minsk-Ivatsevichi-Dolina trunk natural gas pipeline. Increase in gas consumption at the same time requires greater efficiency of gas utilization. A republic scientific-practical conference which convened in Minsk on 23 September is devoted to this problem. V. F. Mitskevich, first deputy chairman of the BSSR Council of Ministers, welcomed the conferees with an introductory address. He drew the conferees' attention to the need to achieve greater fuel economy, the need for extensive utilization of scientific and technological advances as well as advanced know-how in this area, and the necessity of overcoming a complacent attitude toward consumption of fuel and energy. A report on development prospects of the Belorussian SSR gas complex and principal tasks pertaining to achieving savings in natural gas was presented by Ye. M. Chayka, chairman of the BSSR State Committee on Gas Supply. He discussed the experience of the Belgaznaladka Administration, established in the last five-year plan, with the aid of which the appropriate equipment was adjusted and assistance given to enterprises in utilization of secondary energy resources, which made it possible to reduce gas losses, substantially to increase the savings obtained from gas, and to proceed with development of an automated gas facilities control and management system. The conference agenda includes presentations by specialists from republic and national enterprises, in which they will share advanced know-how in achieving gas savings in various branches and sectors of the economy. This will help in extensively adopting the latest advances in this republic's gas industry and facilities. L. S. Firisanov, Belorussian Communist Party Central Committee secretary, is taking part in the conference. [Text] [Minsk SOVETSKAYA BELORUSSIYA in Russian 24 Sep 81 p 1] 3024

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